A Survey of Late Anglo-Saxon and Viking-Age Strap-Ends from Britain

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Submitted in fulfillment of the requirements for the degree of Doctor of Philosophy

Institute of Archaeology
University College London
University of London

2000

ABSTRACT

This thesis presents a national survey of the Late Anglo-Saxon and Viking-age strap-end, one of the commonest manifestations of ornamental metalwork from the period. This survey is based on approximately 1,400 strap-ends, enabling, for the first time, a detailed investigation of various themes concerning their manufacture, circulation, and use.

The introduction (1) describes the organisation and contents of the thesis in light of past work on the subject. A background chapter (2) sets out a methodological framework for the study and then introduces some relevant theoretical considerations. A classification of Late Saxon and Viking-age strap-ends (3) presents the defining characteristics of morphology and decoration relating to a sub-division of the corpus into typological groups. Chapter (4) discusses the variety of contexts in which Late Saxon strap-ends are discovered - highlighting the limitations and implications of each for subsequent interpretation. Evidence of their manufacture and associated technology is evaluated in Chapter (5).

Extended analysis and interpretation then proceeds in the following three chapters. The chronology and distribution of Late Saxon strap-ends are discussed in (6) and (7) respectively. Chapter (8) is primarily contextual, exploring the possible function/s of these artefacts, and the production systems involved in their manufacture.

Chapter (9) offers general conclusions and suggestions for refining the present study and strategies for future research.

Appendices include a comprehensive checklist of individual strap-ends recorded in the survey (1), a preliminary checklist of examples recorded outside the survey area (2), and contextual information relating to strap-ends discovered in stratified, archaeological contexts (3). These are intended to provide the principle source of reference for the classificatory and thematic discussions which form the main text.

CONTENTS

LIST OF ILLUSTRATIONS

Note: unless stated in the following list, all photographs and illustrations are those of the author. In cases where permission has been kindly given to reproduce unpublished drawings and photographs in this thesis the name of the relevant institution or individual is given.

List of Tables (in text)

List of Diagrams

List of Maps

List of Figures

Chapter 2: Methodology

Chapter 3: Classification and catalogue

Chapter 5: Manufacture

Chapter 6: Chronology

A: Seal-die from Eye, Suffolk

B: Detail of pommel from the Abingdon sword

(after Hinton 1974, pl. III, e)

C: Terminals from the 'spur' from Pakenham, Suffolk

(Hinton 1974, cat. no. 29, pl. XV)

D: Silver hooked tag from Kent

E: Detail of the Strickland brooch (Wilson 1964a, cat. no. 152, pl. XLIII)

F: Terminal from one of the horn-mounts from the Trewhiddle hoard,

Cornwall (Wilson & Blunt 1961, pl. XXIVb)

G: Terminal of the Alfred Jewel (Hinton 1974, cat. no. 23, pl. XI)

H: Sculpture from Deerhust, Gloucs (Webster & Backhouse 1991, fig. 27)

I: Detail of a censor cover from North Elmham, Norfolk

(Webster & Backhouse 1991, cat. no. 206)

Fig.6. 3 Comparison of zoomorphic motifs used on the brooches from the Pentney hoard, Norfolk, and selected strap-ends 529

A: Details of the smaller pair of brooches and the larger of the singletons

from the Pentney hoard (Webster & Backhouse 1991, cat. no. 187a, b & c)

B: Detail of strap-end from Østebø, Rogaland, Norway

(after Bakka 1963, fig. 39)

C: Detail of unprovenanced strap-end in the British Museum (cat. no. 391)

D: Detail of strap-end from St-Paul-in-the-bail, Lincoln (cat. no. 407)

Fig. 6.4 Comparison of foliate motifs used on the brooches from the Pentney hoard, Norfolk, and selected strap-ends 530

A: Decorative detail of the smaller pair of brooches from the

Pentney hoard, Norfolk (Webster & Backhouse 1991, cat. no. 187a)

B: Detail of an unprovenanced strap-end in Moyses Hall Museum,

Bury St Edmunds (cat. no. 428)

C: Detail of a strap-end from Ashill, Norfolk (cat. no. 424)

D: Detail of a strap-end from Shropham, Norfolk (cat. no. 425)

Fig. 6. 5 Comparison of foliate motifs used on Late Saxon ornamental metalwork either from or attributed to Wessex 531

A: Incised decoration on the reverse of the Alfred Jewel

(after Hinton 1974, cat. no. 23)

B: Detail of strap-end from Chichester, W. Sussex (cat. no. 429)

C: Detail of a strap-end from Portchester, Hants (cat. no. 421)

NOTES TO READER

1) Diagrams, maps and figures can be found at the end of Volume 2

2) Two abbreviations for figures are used. Fig with a capital 'F' is used to refer to figures provided in this thesis and fig with a lower case 'f' to figures in other texts, except in certain cases where Abb. is used for Abbildung (en), Taf. for Tafel and Pl. for Plate.

3) Place-names are usually given in full, i.e. a parish name followed by the relevant county or unitary authority given in an abbreviated form (see note 4). The only exception relates to the use of the place-name *Hamwic*, which refers to the extensive Saxon settlement near the mouth of the River Itchen in modern-day Southampton, Hampshire. Counties cited relate to post-1974 administrative boundaries, not those associated with the more recent changes to the bounds of unitary authorities made during the course of this research.

4) Abbreviations:

a) General

B.M.	British Museum
C.B.A	Council for British Archaeology
E.H.	English Heritage
Saxon	Anglo-Saxon

b) Counties

Beds	Bedfordshire	Northants	Northamptonshire
Bucks	Buckingamshire	Northumberld	Northumberland
Cambs	Cambridgshire	Oxon	Oxfordshire
Glos	Gloucestershire	Staffs	Staffordshire
Hants	Hampshire	E. Sussex	East Sussex
H & W	Hereford & Worcestershire	W. Sussex	West Sussex
Herts	Hertfordshire	T & W	Tyne & Wear
N. Humb	North Humberside	Warks	Warwickshire
S. Humb	South Humberside	Wilts	Wiltshire
Lancs	Lancashire	N. Yorks	North Yorkshire
Leics	Leicestershire	S. Yorks	South Yorkshire
Lincs	Lincolnshire	W. Yorks	West Yorkshire

ACKNOWLEDGEMENTS

First of all I would like to thank my supervisor Professor James Graham-Campbell, who, as an unfailing source of guidance and support, has overseen my research with generosity, patience and a critical eye. I am also very grateful to both Leslie Webster and Cathy Haith of the Department of Medieval and Later Antiquities at the British Museum for providing stimulating debate over the years and more recently, comments and criticisms on the text.

I would like to thank the following for having taken the time to discuss my work with me and for contributing ideas which I have incorporated into my research: Cyprian Broodbank and Jeremy Tanner, for sharing their knowledge of comparative archaeology and archaeological theory; for their expertise in Early Medieval art, artefacts, and especially metalwork, Tania Dickinson, Helen Geake, David Hinton, Ruth Johnson, Kevin Leahy, Caroline Patterson, Dominic Tweddle, Martin Welch, Niamh Whitfield and Susan Youngs; and their general knowledge of the Late Saxon and Viking-Age period; David Griffiths, Dawn Hadley, David Petts, Andrew Reynolds and Julian Richards.

For sharing their technical expertise and knowledge of metallurgy and archaeological conservation I am also most grateful to: Justine Bayley and Catherine Mortimer of the Ancient Monuments Laboratory, English Heritage; Susan La Niece of the Department of Scientific Research at the British Museum; and Chris Walton, the Director of Design and Technology at The Goldsmiths' Company, London.

I owe a particular debt of gratitude to David Haldenby, who has been especially hospitable and generous in allowing me to visit and record his own collections, but perhaps most importantly, for kindly allowing me full access to his substantial database of finds which he generated through his own interest and research into the subject of Late Saxon strap-ends. My sincere thanks to John Bocking, Jim Patterson, Peter Penfold, and Clive Warren for also making their own private collections available for study and to Joanna Van de Landa of Bonhams the auctioneers, London, for allowing me to view and record private collections prior to sale.

During the data-collection stage of my research I relied upon the professional assistance and support of numerous museum staff, whom I would like to thank individually, they include: Les Good, Bristol Museum & Art Gallery; Ann Inscker, Bedford Museum; Robin Holgate and Elizabeth Adey, Luton Museum; Michael Farley and Linda Babb, Aylesbury Buckinghamshire County Museum; Dr Robin Boast, Cambridge University Museum of Archaeology and Anthropology; Barry Chandler, Torquay Museum; Nick Wickenden, Chelmsford Museum Service; Duncan Brown and Karen Wardley, Southampton City Heritage Services; Robin Iles, Winchester Museums Service; Kay Ainsworth, Hampshire Museums Service, Winchester; Brian Adams, St Albans Museums; Gail Drinkall, Hull and East Riding Museum; Steve Marshall, Canterbury Royal Museum & Art Gallery; Claire Mason,

Maidstone Museum; Dr Robert Philpott, National Museums and Galleries on Merseyside; John Lucas, Jewry Wall Museum, Leicester; Kevin Leahy, Scunthorpe Museum & Art Gallery; John Clarke, Museum of London Early Department; the staff at the students room of the Department of Medieval and Later Antiquities, British Museum; the late Sue Margeson, Helen Geake and Bill Milligan, Norwich Castle Museum; Lindy Brewster at Kings Lynn Museum; A. G. MacCormick, Brewhouse Yard Museum, Nottingham; Arthur MacGregor, Ashmolean Museum, Oxford; Adrian Green, Peterborough Museum; Stephen Minnitt, Taunton Castle Museum; Dr Stephen Plunkett, Ipswich Museum; Christopher Mycock, Moyses Hall Museum, Bury St Edmunds; J. M. Harte, Bourne Hall Museum, Surrey; Emma Young, Barbican House Museum, Lewes; Su Fullwood, Chichester District Museum; Clive Hart, Arbeia Roman Fort, South Shields; Philip Wise, Warwickshire Museum; Dr Paul Robinson, Devizes Museum; Jill Jefferson-Jones, Swindon Museum & Art Gallery; Janet Bell, Salisbury and South Wiltshire Museum; Judith Ely, Rotherham Museum & Art Gallery; Elizabeth Hartley, Yorkshire Museum; Julien Parsons, Sheffield City Museum and Art Gallery; Jim Halliday, the Archaeological Resource Centre, York; Carolyn Wingfield, Doncaster Museum and Art Gallery; Mark Redknap, National Museums of Wales, Cardiff; Trevor Cowie and Ian Scott, National Museums of Scotland, Edinburgh.

For allowing me access to record and providing information on excavated material, I would also like to thank: Holly Duncan, Bedford County Council Archaeological Service; Paul Spoerry, Cambridgeshire County Council Archaeological Service; Ian Riddler, Canterbury Archaeological Trust; M. R. McCarthy, Carlisle Archaeological Unit; Laurence Keen, Dorset County Council Archaeological Service; Sue Tyler, Essex County Council Archaeological Service; Chris Loveluck, Humber Field Archaeology; Lyn Blackmore, Museum of London Archaeological Service; Victor Marchant, Wraysbury and Windsor Archaeological Society; Andrew Rogerson and David Gurney, Norfolk Landscape Archaeology; Anne Dodd, Oxford Archaeological Unit; Bob Carr and Keith Wade, Suffolk County Council Archaeological Service; Gill Woolrich and Nicky Rogers, Yorkshire Archaeological Trust; and finally Martin Biddle and Rosemary Cramp for providing information on strap-ends discovered during their excavations at Repton, Derbyshire, and Jarrow, Tyne & Wear.

The production of this thesis has been reliant on the support and technical advice of various staff at the Institute of Archaeology including: all those in the photography department, especially Stuart Laidlaw, who kindly gave me access to materials and equipment, often at short notice; Dr James Conolly for his patience and invaluable advice on the use of computer packages, particularly ArcView and Photoshop; staff, both at the Institute of Archaeology and University College London main libraries; and finally, for fielding my enquiries at the departmental office, Judy Medrington.

For their support and understanding during the past year I would like to thank my friends and colleagues at Suffolk County Council Archaeological Services, Bury St Edmunds, especially Matthew Ford, Jude Plouviez and Mark Dixon.

Finally I would like to thank my mother, brother, Emily Jane and friends for their constant love and support.

Oxford
January 2000

CHAPTER 1: INTRODUCTION

1.1 Goals of study

The following study of 'Late Anglo-Saxon and Viking-age strap-ends' aims to provide both an explanatory guide to their identification and an interpretative assessment of their role and significance in Anglo-Saxon society. While discussing broader themes, associated with their production and use, this thesis includes the first attempt at presenting, in a classified form, a substantial corpus of what is the commonest find of ornamental metalwork from the Late Saxon period, defined broadly as AD 700-1050. Overall, strap-ends incorporate within a single artefact a wealth of data to support a wide range of observations about the Anglo-Saxon period, which may be compared to, and contrasted with, similar studies of other contemporary artefacts. This work is a testament to the potential of archaeological and artefactual studies when based upon a profitable liaison with metal-detectorists. Without this source of data, many of the conclusions set forth would have remained unsubstantiated, if not erroneous.

1.2 Structure of thesis

The sequence of discussion in this thesis progresses in an ordered fashion from a methodological background, through the presentation and classification of the data, to synthesis and interpretation, discussing a wide range of contextual themes including distribution, chronology, function, and production.

This introductory chapter both describes the lay-out and structure of the thesis and summarises past work on the subject.

Chapter 2 firstly sets out the scope of the research by considering the range of constraints which have influenced the selection, manipulation and interpretation of

the data on which it is based. This is followed by a methodological justification for the classification used in the current study within which both previous strap-end classifications and those of other categories of Anglo-Saxon ornamental metalwork are reviewed. The concluding section, which acts as a general theoretical backdrop to the analysis and interpretation embodied within later chapters, highlights a number of theoretical approaches which have the potential to enlighten future interpretation of patterns of variability displayed by these artefacts.

This study, which collects, for the first time, a national corpus of Late Anglo-Saxon strap-ends, enables the construction of a comprehensive typology in Chapter 3. This forms the backbone of the thesis and includes an attendant checklist of all strap-ends identified in the survey (Appendix 1). In this section, strap-end groups are presented according to a classification system based upon observed similarities in morphology and decorative design between individual strap-ends, in a form which should allow future discoveries of this artefact to be easily classified. While defining types, an exposition of the defining characteristics of each group serves to illustrate the relationships between the group presented and others.

Initially, the classification divides the database into eleven main morphological groups. These are then treated separately, each being sub-divided further by a more refined classification based upon a combination of morphological and decorative attributes. The resulting classification is explicit, simple and flexible so that future finds may be accommodated into the existing system by a wide range of users.

Chapter 4 focuses on the finds contexts of Late Saxon strap-ends. Discussion includes a critical assessment of the various sources of the data, distinguishing between strap-ends discovered archaeologically and through metal-detecting, and how each of these may affect and influence the interpretative conclusions set out in later chapters. Preliminary analysis sub-divides archaeological discoveries into those from excavations and those from hoards, while the nature and significance of

the sites from which strap-ends are derived is discussed more fully in the interpretative section of this thesis, in particular Chapter 8. In the case of metal-detected strap-ends, discussion assesses the contribution of the hobby both to this research project and to similar studies in the light of other recent artefact research based on this source of data (Williams 1997).

Chapter 5 discusses evidence for the production of strap-ends. Manufacturing evidence is sub-divided into metalworkers' hoards, mould fragments and lead models, combined with a study of the objects themselves. A more detailed stylistic appraisal of the decorative techniques associated with these objects is provided in the chapters devoted to presenting the classified groups and strap-end chronology (3 and 7). At this stage, discussion is restricted to presenting the repertoire of metalworking techniques and materials associated with the fabrication and decoration of strap-ends and related artefacts.

The study then moves on to an examination of the chronology of Late Saxon strap-ends in Chapter 6. This begins with a discussion of the origins of the types under review and searches for incipient and transitional forms in the Early Anglo-Saxon period. It is argued that the development of the popular zoomorphic type (Class A, see Chapter 3) may extend back into the 8th century, despite there being little evidence for a continuous typological development from earlier Anglo-Saxon forms. Continental sources are also scanned for possible external influences on strap-end origins and development.

A more detailed chronology is then set out for individual strap-end groups, based upon a number of premises. First of all, the value of hoards and archaeological contexts for constructing a chronology is discussed and their limitations highlighted. An essential component of this section is an appendix of strap-ends from excavated contexts providing more detailed stratigraphic evidence and information on associated finds, where available (Appendix 3). The dating

associated with these 'archaeological' finds is used to bind a floating, relative chronology based upon stylistic and art-historical analysis of strap-end decoration. The latter draws extensively upon parallels in other media from areas within a sphere of cultural, political and economic influence and contact. In the case of the 9th-century type, stylistic features, such as the ubiquitous zoomorphic terminal, trilobate palmette and the use of Trewhiddle-style decoration, are discussed. Continental fashions, are considered as having an increasing influence on the form and decoration of strap-ends from the 10th century. Analysis of the Winchester style and hybrid Anglo-Scandinavian art-styles embellishing strap-ends of this period then follows. The chapter concludes with a brief study of strap-ends belonging to the Saxo-Norman period in order to trace the development of Anglo-Saxon types beyond the conquest and assess their influence on later medieval forms.

Chapter 7 discusses, with the aid of maps, the distribution of the sub-groups defined in the classification. While acknowledging the limitations and bias inherent in artefact distributions, especially those consisting of large numbers of metal-detected finds, this section highlights the duality in the distribution of these artefacts. Most striking is the widespread distribution of general types, especially the stereotyped 9th-century form - examples of which have been found as far apart as Cornwall and the north of Scotland - signifying a circulation and popular usage apparently unrestricted by political, social and geographical boundaries. Underlying this are more defined regional stylistic sub-groups, evident at various levels of localisation. These range from those determined at the level of the kingdom, or spheres of cultural influence, such as that associated with Viking settlement in the Danelaw, through to smaller numbers of related finds, best interpreted as products of a single workshop or manufacturing centre.

These regional strap-end sub-groups are then compared and contrasted with other contemporary artefact types, including related dress-accessories such as hooked

tags, but also coinage and pottery to establish more general patterns of regionalisation in the archaeological record. Mention is also made of Late Saxon strap-ends discovered beyond the geographical constraints of the present survey, accompanied by an appendix of all known examples recorded outside mainland Britain (Appendix 2).

Chapter 8 takes the form of a synthetic and interpretative appraisal of the data discussing broader contextual themes associated with these objects' manufacture and use. A central theme is the function/s of these artefacts. The discussion evaluates a range of sources drawn to assist in the attribution of the original use/s of these artefacts, including representations in contemporary, or near contemporary, illuminated manuscripts and sculpture (Owen-Crocker 1986). Ultimately, the study acknowledges a reliance upon the evidence of the artefacts themselves for this purpose, especially on the contexts of their discovery.

Unfortunately, because the period under review was one of Christian burial, very few extant strap-ends represent grave-finds. This has important implications for assessing their original function. Accompanied graves are one of the most important sources for preserving the original context of use of a dress-accessory. Despite the general dearth of this source, especially from Anglo-Saxon England, discussion reviews the evidence for function provided by strap-ends discovered in pagan Viking graves in this country and Scandinavia.

These grave-finds are also highlighted in an exploration of the relationship between strap-ends and buckles, which may have been used together for specialised purposes, on sword harnesses and spur-fittings, for instance. Further examples of suitably sized buckles that could have been used in association with strap-ends are sought to establish whether there may have been a more general link between the two classes of artefact.

In the effort to define possible functions, this section also reviews the nature and status of the sites on which Late Saxon strap-ends have been discovered. This includes an exploration of the relationship between the large numbers of strap-ends discovered from monastic and so-called 'productive sites' and considers whether this is a reflection of these sites being production centres or whether they were associated with specialised activities in which strap-ends played a role.

Further analysis focuses on the scale and organisation of the production systems associated with strap-end manufacture, and assesses whether these systems were subject to regional and/or chronological change. By drawing together evidence presented in previous chapters for fabrication techniques and materials (Chapter 5) and the spatial distribution and stylistic variability displayed by individual groups (Chapter 7), it is argued that the modes of production were both fairly low-level and unchanging in respect to temporal and spatial variables. Moreover, a comparison with other contemporary dress accessories such as pins, hooked tags, and brooches, suggests that the manufacture of strap-ends was less subject to increasing specialisation during the Late Saxon period, perhaps reflecting the primarily decorative nature of these artefacts.

Chapter 9 provides some final conclusions and offers avenues for future research, together with a critical assessment of the procedural methodology employed, suggesting how it might be improved and augmented given fewer constraints.

1.3 Past work

The original decision to embark upon this study of Late Saxon strap-ends resulted from the realisation that there had been no attempt either to quantify or to qualify the greatly expanded database of these finds since they first attracted extended discussion in the 1960s (Wilson & Blunt 1961; Wilson 1964a, 62-3). More generally, previous research on the subject has been limited in scope. Previous to

this study, strap-ends have only been described individually or in small groups within museum and exhibition catalogues, excavation reports, or else short notes in national and regional journals. The summary of past work on strap-ends presented below reflects this lack of research and serves to highlight the value of the present study.

The earliest record of a Late Saxon strap-end can be found in Rashleigh's articles on the Trewhiddle hoard, published in the journal Archaeologia at the end of the 18th century (Rashleigh 1789; 1794). These provided a primary descriptive record of the two pairs of strap-ends discovered in the hoard only, and made no attempt at ascribing them either a name or a function - or at arguing for their contemporaneity with the accompanying coins described as 'Saxon' (Rashleigh 1789, 187).

Published examples of individual strap-ends appear in the archaeological and historical surveys of the 19th century, when the distinctive zoomorphic variety was first identified as being Anglo-Saxon in date, although there there was a lack of consensus concerning their function or more precise dating (e.g. Hawkins 1847; Cuming 1868; Hume 1863; Roach Smith 1850). Cuming, for example, described the nielloed strap-end from Halstock, Dorset, as 'a portion of a hook once riveted to the end of a narrow belt for the support of some implement or ornament' and attributed it to the 5th century (Cuming 1868, 215-16). A similar 'early' dating was also suggested by Roach Smith (1850, 88) in his interpretation of the 'tag' from the Roman fort at Richborough, Kent, describing it as a 'pendant end of a belt'. Hawkins, meanwhile, was more accurate in his dating of the silver strap-end from the Cuerdale hoard, comparing its animal ornament to that on Æthelwulf's ring, dated by inscription to the ninth century (Hawkins 1847, 196).

Selected strap-ends were later discussed in art-historical studies and catalogues of the first half of the century, by which time they were specifically described as 'Late Saxon'. Examples were usually highlighted if their ornament could be used to

service a presentation of art-historical analysis defining and tracing the development of contemporary art styles (Leeds 1911; Smith 1923; Brøndsted 1924; Kendrick 1938a).

E. T. Leeds should be credited as the first scholar to present a fuller discussion and analysis of these artefacts in his paper focusing on the two pairs of silver strap-ends from Lilla Howe, N. Yorks, in Liverpool Museum (Leeds 1911). In a characteristically perceptive and forward-looking account, Leeds sought to relate the Lilla Howe finds to a distinctive 'school' of Late Saxon art, previously defined by Reginald Smith in his discussion of some of the objects contained within the Trewhiddle hoard (Smith 1904). Although no attempt was made to ascribe a function, Leeds highlighted the defining characteristics of 9th-century strap-ends, remarking on the similarity of those discovered in datable silver hoards to related examples in museum collections (Leeds 1911, 6). His dating was also based on a comparison of the distinctive zoomorphic terminals characteristic of the series, to those depicted on other objects believed to be of a similar antiquity, most significantly to those on the Alfred Jewel and on the repair-clips used on the Ormside bowl (ibid., 7-9).

Brøndsted was the next author to focus on strap-ends, briefly listing a total of twenty-six 9th-century examples from museums in London and 'the provinces', distinguishing between those with recognisable 9th-century Trewhiddle-style animal ornament and those without (Brøndsted 1924, 129-32). In addition, he also highlighted two later bone strap-ends as an illustration of the influence of Carolingian plant and animal decoration on Anglo-Saxon art of the 10th century (ibid., 159-60).

Despite Brøndsted' s attempts to encourage work on the subject of strap-ends, studies on Late Saxon art and metalwork over the next twenty years tended to overlook this important source of evidence. It is significant, for example, that little

or no mention is made of Late Saxon strap-ends in the major art-historical syntheses of Baldwin Brown (1903-27) and Kendrick (1938a; 1949).

An exception was Kendrick's 1938 article which considered a small corpus of later (10th/11th century) strap-ends in his analysis of an Anglo-Saxon cruet (Kendrick 1938b). The four examples highlighted in his discussion, all of southerly distribution, were instrumental in providing useful comparisons for the Winchester-style ornamental motifs used on the cruet, so establishing a 10th-11th-century, southern English context for it.

The next significant study was based on the corpus of fourteen, 9th-century strap-ends discussed by Peers and Radford in their interpretation of archaeological evidence from the Anglo-Saxon monastery at Whitby, N. Yorks (1943). They concluded that these 'metal-tags', because of their flimsy design and apparent association with ecclesiastical contexts, should be seen as the ends to silk-ribbon bookmarks, distinct from strap-ends associated with costume (ibid., 56). Additionally, art-historical analysis of the more elaborate examples, decorated with characteristic Trewhiddle-style ornament, was used by them to ground these objects firmly within a 9th-century horizon.

By the date of the next study, the known total of the zoomorphic type of these artefacts had increased to eighty or so (Wilson & Blunt 1961, Appendix C). These were listed in an appendix accompanying an extended discussion of the ornamented silver strap-end pair from the Trewhiddle hoard which also examined the origins, function, morphology and decorative features of these artefacts. It was argued that the origins of the 9th-century zoomorphic type could be traced back to a 'pagan' Saxon context, and suggested a further usage as girdle-ends, on the basis of parallels with similar objects, often associated with buckles, from Viking-age Scandinavia (ibid., 97-8).

During the next twenty years, work focusing on this artefact type tended to be of an incidental nature, usually discussing recent finds or individual examples in larger museum collections of Late Saxon metalwork (see Wilson 1964a; Hinton 1974; Backhouse et al. 1984). Most important was Wilson's (1964) catalogue which presented a thorough art-historical appraisal of strap-ends within the B.M. collection, drawing on comparisons from other contemporary art and metalwork, including strap-ends outside the museum's collections (ibid., 28). In addition, the author included a section of further discussion, reiterating his conclusions on the function and chronological development of strap-ends, as outlined in his 1961 publication of the Trewhiddle hoard (ibid., 62). The 1960s also saw a series of articles published by the same author on the growing number of 10th-century strap-ends discovered from the major excavations at Winchester and York (Wilson 1965a & b; 1969). These, in part, highlighted the influence of Scandinavian artistic fashions on metalwork of the period, for both 1965 publications discussed strap-ends with English versions of the Borre and Jellinge styles, while his 1969 article heralded the elaborate Winchester-style example from the Old Minster, Winchester, as 'the finest Anglo-Saxon strap-end ever found' (Wilson 1969, 327).

During the past fifteen years, despite the exponential increase in the number of finds primarily through metal-detecting, publication and analysis has been limited, again following a preoccupation with art-historical themes (Keen 1986; Graham-Campbell 1985; 1988; 1989). The most notable contributions, in what amounts to only a small corpus of work, highlighted the wide range of decorative techniques and regional variations within the form and ornament displayed on the 9th-century type (Graham-Campbell 1982a; Bailey 1993; MacGregor 1994). Such observations have been substantiated, in part, by the discovery of a strap-end mould from Carlisle which displays many of the features to be found on what has become recognised as a distinct northern variant of such 9th-century strap-ends (Taylor & Webster 1984).

To date, the most comprehensive and detailed discussion of strap-ends is that of Leslie Webster, but again, as part of a wider catalogue of Anglo-Saxon art and culture (Webster in Webster & Backhouse 1991). In collecting recently excavated and metal-detected strap-ends with published examples, she provided a suitably sized selection for the pursuit of questions of regionality and chronology within strap-end form and decoration. Webster's preliminary conclusions have awaited, until now, confirmation and modification by the more detailed and wider-ranging research, only realisable in the context of a national survey.

CHAPTER 2: METHODOLOGY AND CONTEXTUAL BACKGROUND

The first section of this chapter describes the data selection process and specific factors and constraints influencing the size and scope of the sample of strap-ends studied. This is followed by an inquiry into the methodology which underpins the classification presented in Chapter 3. The final part of the chapter introduces some theoretical issues relevant to the study of artefacts from the Late Saxon and Viking-age period. While not directly applied to later interpretative chapters, such discussion brings into focus some current trends in archaeological theory that have the potential to enhance future research based upon the data and analysis presented in this thesis (see Chapter 9).

2.1 Constraints of study

Three main types of constraint shape the current study. These are: (1) researcher imposed; (2) archaeologically imposed; and (3) bureaucratically and pragmatically imposed.

2.1.1 Researcher imposed

These consist of a range of constraints consciously imposed by the writer to define the limits of the research project.

a) object type

A strap-end is defined, in the very broadest terms in this study, as an artefact designed to fasten to the end of a strap, belt or girdle to prevent it fraying and/or to weight it down. As such, if complete, the object must show some clear signs of attachment features, such as rivets or rivet holes, which fastened it to the strap. Because strap-ends acted as terminals they are never equal ended, as opposed to mounts and other fittings that might be attached along the length of a strap or belt.

Consequently, most have an obvious terminal opposite the attachment end. These terminals offered a focus for artistic embellishment, which, in accordance with contemporary tastes for zoomorphic decoration, were often fashioned into animal heads seen from above, though simple, curved forms were also used, especially later on in the sequence.

Considering that strap-ends were used throughout the Anglo-Saxon period, it is important to distinguish the types which form the subject of this thesis from earlier and later forms. Essentially, this task may be achieved by considering their method of attachment. Late Anglo-Saxon and Viking-age strap-ends are most commonly provided with a split at the butt-end to receive the strap which is riveted in place. The robustness of some later (10th century) strap-ends effected a modification in the attachment design, leading to the replacement of the delicate split butt-end by a recessed attachment end integral to the main plate, with the use of a greater number of rivets.

The majority of strap-ends belonging to both the Early Saxon and later medieval periods are characterised by their composite designs. These commonly involve two or more sheets or cast plates which encase the strap and are then riveted together (see MacGregor & Bolick 1993, 208-9). One group presented in the survey, Class I, have such a design, but are late in the series, and thus should be considered an innovation which inspired the design of later medieval types.

Conversely, there are some rare instances of split-end strap-ends from the Roman and Early Saxon periods (e.g. late Roman amphorae-shaped strap-ends), a version of which is seen on the belt-set from Dorchester-on-Thames, Oxon (MacGregor & Bolick 1993, cat. no. 35.10). Other notable exceptions are the 7th-century strap-ends from high-status Kentish graves at Faversham and Sarre (Fig. 6.1D). Potentially confusing examples such as these may, however, be readily discounted on stylistic, morphological and contextual grounds.

Other objects may occasionally be misidentified as strap-ends, or vice versa. A potential area of confusion is that strap-ends were sometimes adapted to other, more specialised uses. For instance, the terminals may be drawn out and bent to form hooks, in which case they should strictly be classed as hooked tags, another common item of contemporary ornamental metalwork most likely used as a dress fastener (Norris & Hockings 1953; Hinton 1996a, 169/2622). The stereotyped form of hooked tag differs in having a triangular or sub-circular plate, as well as a different method of attachment involving sewing through a pair of circular attachment holes rather than by riveting into a split-end (see Fig. 6.2D).

The identification of simple, folded-sheet strap-ends is especially tenuous and, in some reports, they are often classified as bindings or clips of medieval date (see Margeson 1995, 67). Enough is now known of Middle and Late Saxon contexts, however, to include them confidently within the scope of this study (see Class J, Chapter 3).

This study also embraces a group of double-sided strap-ends, probably of Irish origin, which differ from the regular Anglo-Saxon series in the style of their ornament, detailed features of their terminals and their use of decorative roundels, which are often perforated (see Class F, Chapter 3). Although it has been suggested that some of these may have had a specialised function, perhaps as book-clasps (Wilson in Bersu & Wilson 1966, 76), they are close enough in date and design to merit inclusion in this survey.

Fragmentary finds obviously make attribution more problematic. A good example is the fragment of decorated silver from Cricklade, Wilts, which was first assumed, on primary observation, to be the mid-section of a strap-end, but on closer examination was reinterpreted as part of a mount from an object such as a drinking-horn (Graham-Campbell 1974, 48). Only fragments displaying those features defined as diagnostic of the series are considered in the study.

b) Temporal

The chronological horizon that is implied by the title 'A new survey of Late Anglo-Saxon and Viking-age strap-ends' requires some discussion and clarification. 'Late' in this context does not correlate to the 'Late' used in the general subdivision of the Anglo-Saxon era into Early, Middle and Late periods, traditionally with the date ranges of AD 450-650, 650-850 and 850-1050 respectively. Here it is used to define the various types of strap-end which superseded those forms current in the earlier, pre-conversion period which are generally discovered in pagan graves. It should be stated that strap-ends as an object type were used throughout the entire Anglo-Saxon period, though their popularity fluctuated, with a floruit in the 9th century.

The types of strap-end which form the basis for this research were current at various times between AD 700 and 1050, though these limits should not be taken as absolute, for neither represents a mystical date marking a sudden transition in artistic or stylistic terms. Although the strap-ends produced and circulated during this 350-year period are the main focus of this thesis, a full contextual appraisal would be impossible without considering, in some detail, their place in a typological series which extends beyond these chronological parameters. Consequently, strap-ends belonging to both the Migration and Saxo-Norman periods will be discussed where appropriate.

c) Geographical

This survey encompasses material found within mainland Britain, including the whole of England, Scotland and Wales (see Chapter 7). Information on Late Saxon strap-ends discovered beyond this area is included in Appendix 2.

2.1.2 Archaeologically imposed

The data on which this study is based and the detail to which it has been recorded has been affected by a number of processes and constraints beyond the control of the researcher. Ultimately, the final body of material represents a severe under-representation of the quantity of strap-ends actually produced and circulated in the Mid-Late Saxon period. Prior to inclusion in the archaeological record, the number would have been seriously depleted by re-use and recycling for raw materials in the manufacture of new artefacts. Scientific analysis of contemporary copper-alloy objects, including strap-ends, indicates that the most common source of metals was from such recycled artefacts (Mortimer 1991; see Chapter 4). The incentive for recycling metals would have been even greater in the case of precious metal strap-ends since they would have provided a source of silver for coinage and bullion. This point is illustrated by the inclusion of strap-ends in contemporary hoards of precious metal (see Chapter 6). Late Saxon strap-ends from Viking-age contexts in Scandinavia highlight another source of depletion.

The next point to consider in the series of processes resulting in the extant sample is how strap-ends originally entered the archaeological domain. The overwhelming majority of discoveries represent casual losses on sites with contemporary occupation/activity, though this link is often impossible to establish given the large number of metal-detected finds. Far fewer are associated with deliberate deposition either in graves or hoards. This contrasts with dress-accessories of the Early Saxon period, which are primarily recovered from closed grave assemblages preserving their original context of use. This change has important implications for reconstructing the original function and distribution of these finds, aspects of which will be discussed further in detail.

Once part of the archaeological record, the survival of strap-ends, as with any other artefact, is subject to a range of taphonomic and post-depositional processes. The materials used to make strap-ends also influence the quality and level of survival.

Obviously, given the right deposition conditions, non-ferrous strap-ends will have a greater chance of survival than iron and organic examples made of bone and antler. This factor should be borne in mind when reviewing the significance of the relatively small numbers of more 'vulnerable' strap-ends.

The vulnerability of organic materials has led to a frustrating lack of straps, belts and girdles to which these artefacts were originally attached, further compounding attempts to establish their function/s. Occasionally, small fragments of woven textile survive in the recesses of split-ends or on other attachment features (Fig. 2.1), but these are usually too small to reconstruct precisely the look and function of the strap.

It is also important to regard the effects of damage and corrosion on the original appearance of the strap-end. Often the current condition of extant finds belies their original lustre and sheen, which would have been entirely in keeping with contemporary aesthetic tastes (see Dodwell 1982, Chapter 2). The delicate decorative appliqués and inlays often used to decorate strap-ends of this period are also subject to loss and corrosion and, in the case of detected finds, ignorance on the part of the finders may result in their damage or removal by over-zealous cleaning. Enamel inlays are particularly relevant in this respect, as they degrade into chalky compounds with little bearing as to their original colour and opaqueness (see Chapter 5).

The recording system used has had to accommodate the effects of varying degrees of damage and corrosion on much of the database. Apart from the loss or damage of decorative inlays, a common affliction of the 9th-century series as a whole is the breakage and loss of their delicate split-ends and, to a lesser extent, breakage associated with the narrowing towards their zoomorphic terminals.

The recovery and identification of strap-ends is the next point to consider. The sample is significantly affected by biases inherent in the two major recovery methods, archaeological excavation and metal detecting. The former is restricted and

guided by the distribution of archaeologists and their particular rescue and research goals and interests. Before the second half of this century, sites likely to yield artefacts of this date were low on the agenda of research priorities. Excavated finds are also biased in their distribution, because in the past the location of sites was often a reflection of the distribution of academic bodies, but increasingly, with professional contract archaeology, it is a result of the siting of developments which are more common in urban contexts.

The archaeological biases discussed above are redressed, to some extent, by the activity of metal detectorists, though this source of material is, in turn, influenced by its own particular constraints, discussed more fully in Chapter 4.

2.1.3 Bureaucratic and Pragmatic

The third and final set of constraints relates to purely bureaucratic and pragmatic factors. Limited resources of time and money have necessarily influenced the scope of the data-collection and the level of associated detail. All major museums with strap-ends in their collections were consulted, as were all major archaeological bodies, including excavation units and Sites and Monumenents Records (SMRs). This fieldwork followed an initial stage of data-collection involving a rigorous search of published strap-ends. Wilson's checklist (Wilson & Blunt 1961, Appendix C), acted as a useful springboard for this search, which was subsequently extended to museum and exhibition catalogues, excavation monographs, and regional archaeological periodicals and newsletters.

In an attempt to extend and supplement data on metal-detected finds obtained from museums and SMR's, individual detecting clubs, hobbyists and collectors were also contacted and, in some instances, visited to record data as primary source. This involved an element of quality control, since the limits of logistics and liaison need to be taken into consideration. Consequently, only club-members, independent detectorists and collectors brought to my attention through their particular interest in

Late Saxon strap-ends were contacted.

The recording system had to be both quick and flexible because of the limited time available and the variety in the detail and quality of the data for each object. Intrinsic to this system was the recording of morphological and decorative features on a computerised database. Only the dimensions of maximum width and length were recorded as a substantial amount of information was based on drawings and photographs. Every object available for primary study was photographed, and selected objects were also illustrated.

The lack of any scientific or technical study of these artefacts has had other constraining effects on the research. X-rays are often the only means of reconstructing the original decorative designs on heavily corroded examples. The absence of this identification technique from the survey has resulted in some potentially classifiable examples being allocated only to the most general morphological types.

The positive identification of decorative inlays is often reliant upon scientific analysis, as is the differentiation of the materials used. Corroded niello, for example, is often visibly indistinguishable from pure silver or enamel inlays (Hughes 1987). Moreover, without scientific examination, it is often impossible to reconstruct the original colour and opacity of enamels which may have been consciously chosen to contrast with the colour and qualities of the surrounding metals.

Another resulting limitation is that the assessment of metallurgical composition has, in most cases, had to be based upon visual means only. It should be taken into consideration that during manufacture, particular alloys may have been selected for their specific qualities such as colour, malleability, workability and durability. Such attributes may, if studied, have an important bearing upon the classification and dating of these finds (see Blades 1995).

2.2 Classification and typology

One of the most important objectives of this research has been to produce a classification of Late Saxon strap-ends, although it is more accurate to use the term 'typology' for the system that is intended. This makes a distinction between a classification which is simply the result of creating categories, and a typology which involves more than labelling and categorising, but arranging artefacts into discrete groups which correspond to predefined classes (Adams 1988, 47). This is a necessary, indeed fundamental, stage in presenting and analysing any new corpus of artefacts. Past attempts at classifying and sorting strap-ends have been primarily for descriptive purposes when publishing a corpus of strap-ends from a specific archaeological site. As such, these classifications need only be tailored for the strap-ends they describe in the relevant report, rather than having general applicability and utility to the artefact class as a whole.

Hinton, for example, in his publication of the non-ferrous objects from Hamwic (1996a) classified the strap-ends into five groups, stating "a more rigid classification could probably be made, but the range is so wide that it might serve to confuse rather than to clarify" (ibid., 37). His first four groups, A-D, were subdivided on morphological grounds, taking into account the number of rivets used for attachment, and the form and shape of the terminal and shaft. The last group, E, was distinguished on constructional and technological grounds, however, consisting of examples made of folded and sheet metal.

The corpus of strap-ends from Winchester, published in an earlier report by the same author, lent themselves to a much simpler classification (Hinton 1990a & b). Here, details of decoration and attachment morphology were used to distinguish 'relief-decorated' strap-ends from those with 'split-ends'. This division relates to an intuitive separation of the series into two broadly chronologically consecutive groups: the earlier one characterised by the use of zoomorphic terminals and split-ends (see Chapter 3, Class A), and the later by a more robust tongue-shaped design,

based on Carolingian fashions (see Chapter 3, Class E). This simple classification is reinforced by a marked difference in the range of decorative techniques and styles with which each group is associated. These contrasts have resulted in the two forms being treated separately in archaeological literature. The dissimilarity of the groups enabled Wilson to list only the earlier type in his 1961 appendix (Wilson & Blunt 1961, 120). However, 19th-century publications made no such distinctions - Hume's discussion of metalwork from Meols, Cheshire, classes together strap-ends of all periods from Anglo-Saxon through to medieval (Hume 1863).

The present study, in collating a substantial database, allows the formulation of a typology that will have a universal application to this object type. The departure for this typology arises from two preliminary questions: how will the final typology be used and by whom? In regards to the latter, one of the most important aims of the classification has been to produce a flexible, user-friendly system that may be used outside archaeological circles. As such, designated types must be readily recognisable by eye and have the potential to encapsulate the fragmentary and corroded nature of the majority of finds.

In relation to the first question, a useful typology or classification must serve a number of purposes, ultimately reflecting the aims of the classifier. The primary aim in the case presenting a new body of material, as here, is descriptive in order to arrange and group material in a meaningful fashion for presentation and comparison (Deetz 1977). Other functions may be more 'instrumental' (Adams & Adams 1991), aiding in the identification of regional and chronological patterns amongst the data. In the words of Tania Dickinson, "Most archaeologists expect, as a primary *desideratum*, a classification to recover chronological sequence and regional patterning" (1993, 13). On what grounds can archaeologists base such expectations? And, in light of this, should one take for granted that a particular artefact classification reflects temporal and spatial variation?

An understanding of the premises on which these conclusions are based is an

important methodological issue behind any artefact classification. In the sphere of Anglo-Saxon artefact studies, it is those associated with Early Period brooches which have been most concerned with the past uses and abuses of artefact typologies. In light of the fact that many 19th- and early 20th-century brooch classifications were often vague and poorly defined, these modern studies seek to apply a more methodological classificatory approach, in which the criteria for establishing types are explicitly stated. A brief review of these studies thus offers an important comparison for the methodology behind the classification intended here and what it may hope to achieve.

Recent Early Anglo-Saxon brooch classifications share the same goals in that they are primarily intended for dating purposes, in a period lacking (within Britain) an independent chronology based upon a study of coinage and documentary sources. This intention is summarised in the introduction to Hines's study of Anglo-Saxon great square-headed brooches in which he writes (Hines 1997, 2):

> In nearly all cases, some relationships can be discovered between groups of brooches or individual brooches, with the result that a full sequence of development within the series, from the earliest to the latest, can be revealed. This provides us with, for early Anglo-Saxon England, an unusually detailed sequence of relative chronology. Through external associations with fixed points in Scandinavian and Continental archaeological chronology, a tolerably trustworthy absolute chronology can be calculated for the sequence, indicating that the production of the Anglo-Saxon square-headed brooches developed over about seven decades from *circa* 500 to *circa* 570.

A detailed critique of the methods used in the construction of chronologically meaningful typologies is well beyond the scope of this study and has been investigated elsewhere (Wilson 1959; Brooks 1994). Essentially, these brooch studies attempt to apply a Montelian approach to classification, involving eight stages: (1) selecting the archaeological material to be used; (2) defining artefact-

types; (3) sorting the artefacts into types and subtypes (classification); (4) using find-associations to determine find-horizons; (5) using mixed finds to determine the sequence of find-horizons; (6) from that sequence, deducing the sequence of groups within types; (7) arranging the results in typologies; (8) absolute dating by external evidence (quoted in Brooks 1994, 104).

The third stage (3) involves the identification of a set of compositional elements within the design of each brooch. These can then be compared from one brooch to the next and a system for defining degrees of similarity and correlation applied. This stage often involves statistical methods such as correspondence analysis to define clusters of similar attributes which can then be used as the basis for group definition. While such analyses may help to highlight similarities between individual artefacts, it should be noted that they are still subjective in the sense that the classifier must first select which attributes are to be compared.

Clearly, the potential of a classification to fulfil such expectations is largely influenced by the nature and quality of the data. The data on which these studies are based differs in many respects from that used here. This has ultimately great bearing upon the structure of the classification system and imposes limitations upon its 'instrumental' use.

The majority of Early Anglo-Saxon brooch classifications are based on finds derived from closed grave assemblages, which usually contain a standardised range of associated artefact types, which provide a means for constructing a relative chronology. This is a primary requisite for the application of a structured hierarchical classification system such as that advocated by Montelius in the 19th century. This situation rarely exists for Late Saxon and Viking-age strap-ends; archaeological contexts are lacking for the large percentage of metal-detected examples and, beyond a handful of grave finds (Chapter 8), the majority of archaeological discoveries represent stray losses on settlement sites where the dating of individual deposits is often complicated by such factors as artefact residuality (see

Chapter 6). Consequently, the opportunities for constructing internal 'relative' sequences for strap-ends, and post-Conversion period artefacts in general, using stages 4 to 7 of Montelius's system are few and far between.

Obviously, this shortcoming imposes limitations on one's ability to decipher chronological relationships between individual 'types' of strap-end, thereby reducing an overall typology's ability to elucidate fine dating distinctions. It should be noted, however, that the typological method embodied within Montelius's system is itself open to criticism (Wilson 1959). Most pertinent to the study of Late Anglo-Saxon ornamental metalwork is the cautionary lesson that the proliferation or stylisation of decorative motifs may be as much a result of differing quality or regional production as it is of temporal change (see Chapter 6).

Fortunately, the factors influencing the current typology's accuracy as a dating tool have no bearing on its ability to define or reflect regional patterning. Indeed, the fact that the majority of strap-ends represent archaeological losses discovered by the random searches of metal-detector enthusiasts is itself considered an advantage for reconstructing archaeological distributions (see Chapters 4 and 7).

Having discussed the limitations of the current classification's instrumental uses, it remains to discuss how the nature of the data on which this study is based has influenced the process of classification. As alluded to above, some of the recent Early Anglo-Saxon brooch classifications have employed statistical techniques and formal analysis to identify typological groups. There are several reasons why the current study has not utilised such techniques, foremost being the size and a variability of the database.

Hines's corpus consisted of only c. 200 great square-headed brooches but his classification resulted in as many as 25 sub-groups (1997). Dickinson (1993) sampled 70 of the known total of 600 saucer brooches, focusing her programme of formal analysis on those with five running spiral decoration. Despite this small

sample, the resulting classification proved complex, leading her to exclaim: "How much more so would such a system be to encompass the entire Corpus! It may therefore prove too cumbersome to attempt it" (ibid., 15).

Both the brooch types discussed above were current for comparatively short periods of time and are associated with a relatively restricted range of morphological and decorative variables. Saucer brooches, for example, are remarkably consistent in form and, although they are decorated with a wide range of designs, being exclusively high-status objects their decoration is usually crisply executed (Dickinson 1993, 39). The same is also true of great square-headed brooches (Hines 1997, 10). Consequently, in both these cases the typological process is able to draw upon a set of clearly represented compositional variables common to individual brooches.

The present study in encapsulating material spanning a 350-year period has had to integrate several distinct forms of strap-end within a single overall classification. Diversity is not only reflected in the considerable morphological and compositional differences existing between these principal forms but also in the high levels of stylistic, and to a lesser extent, more detailed morphological variations apparent within them. The wide range in status inherent in the strap-end database has also moulded the current classification. Unlike the aforementioned brooch forms, a large percentage of strap-ends represents stylised or simplified copies of higher status exemplars thereby introducing a further dimension of variability into the equation. Clearly the size and diversity of the strap-end database necessitates a less complex typological process than those applied to the Early Anglo-Saxon brooch forms.

In addition to this inherent variability, the current typology has also been influenced by the need to integrate a large body of metal-detected finds; material often ill-suited to the analysis and comparison of detailed compositional attributes. Such ploughsoil finds frequently suffer higher levels of corrosion and damage than artefacts excavated from undisturbed funerary contexts and are seldom recorded to such a high

standard (see above). Combined, these factors have severely limited the recognition of detailed relationships between individual strap-ends, a task also frustrated by the fact that examples recorded first hand were scattered amongst a large number of archaeological and private collections.

The factors discussed above have contributed to a classificatory system which relies heavily upon basic visual criteria for type definition, rather than a set of more rigorously defined variables relating to details of decorative composition. Within this framework, the classification makes no excuses for drawing extensively upon established art-historical categories applied to the Late Saxon and Viking-age period. Being in the main decorative objects, much of the database is readily attributable to contemporary art styles which often provide the most obvious and convenient means for structuring the data on a visual basis. Moreover, the use of such styles permits links to be established to a broad range of contemporary metalwork and artistic media thereby helping to place these artefacts within a cultural and chronological context.

2.3 Theory and social context

The following section is intended to provide the analysis presented in later chapters with a general theoretical backdrop. It should be stated that the suggestions advanced below, while not necessarily being intrinsic to later interpretation, are nevertheless useful in highlighting some theoretical issues relevant to the study of artefacts from this period.

2.3.1 Contextual background

Some background information is first required to contextualise this theoretical discussion.

The main period under discussion in this research, that which encompasses the later 8th, 9th and 10th centuries, is one of great dynamism and growth. The whole spectrum of social, political and economic systems was undergoing systematic change and transformation. Political fragmentation, characteristic of the Early and Mid Anglo-Saxon periods, gave way to the emergence of a politically unified nation. It is legitimate to talk of a Late Anglo-Saxon state and the archaeological record provides us with many diagnostic traits defined as representative of state societies (see Earle 1990). Perhaps most germane to the study of strap-ends is the growth of towns and the centralised production of certain classes of metalwork during the 10th century (see Chapter 8). This is reflected in the increased number of stereotyped strap-ends made in base metals such as the alloys of copper and lead. An understanding of this development should also acknowledge changing attitudes towards material wealth. From the 10th century onwards, the material record appears to reflect a reduction in the conspicuous display of personal wealth through dress and regalia (Hinton 1975a, 179-80; 1978, 142-3). Hinton suggests that this is related to changing perceptions and attitudes towards wealth and status, structured, in part, by increased political and social stability, although economic factors, such as coin-reform and Danegeld levies, may have also played a part (in Hinton 1978, 142;

1990d, 102).

The 9th century is remarked upon for its seeming homogeneity in respect to the types of artefact produced and circulated and the styles in which they were decorated. For the first time in the Anglo-Saxon period, we see the adoption of what may be termed a 'national' artistic style - the Trewhiddle style - which has been recognised on objects with provenances in Anglo-Saxon England as distant as Cornwall and Talnotrie, Dumfries & Galloway, Scotland. On metalwork, the repeated use of techniques such as engraving and niellowork serves to heighten this sense of uniformity. Widely-distributed artefact types, such as strap-ends, hooked tags (Griffiths 1987; Graham-Campbell 1982a) and pins (Ross 1991), appear to represent a level of cultural homogeneity which can be contrasted to the material culture of the preceding centuries (Hinton 1999, 26). Ross concluded from his (1991) study of Anglo-Saxon pins that, from the 8th century onwards, the Anglo-Saxons began to develop a conservative attitude towards material culture closely related to social, political and economic change.

Despite this seeming homogeneity, new research, exemplified by the evaluation of the strap-end database, suggests that this apparent uniformity belies underlying regional variations. This is especially the case in relation to the Trewhiddle style itself, as regionally directed research isolates local trends which appreciably extend our knowledge of the range and repertoire of motifs associated with this style (Thomas 1995, 15-19). Overall, these results highlight the complexity and vitality of regional identities which existed in 9th-century Anglo-Saxon England. Despite the aforementioned factors, it remains highly significant that during this period local craftspeople drew upon a common artistic source to embellish a limited range of artefacts.

The general homogeneity of this period can be contrasted with the diversity in artefact types encountered in the Early Anglo-Saxon period and their distinct distributions suggestive of regional and ethnic identities (Richards 1988; Dickinson

1991; Scull 1993, 71; Hines 1994). In the 7th century, regionally-distinctive jewellery types gave way to a more uniform material culture, in line with continental fashions. This may be a reflection of the development of a specifically English identity as expressed by Bede in his use of the term *natio Anglorum*. However, as Hines stresses (1994), distinctive group-marking continued to find avenues of expression in the 7th and ultimately into the 8th century. The main players in the emerging political hierarchy, kingdoms such as Northumbria and East Anglia, were to foster and promote indigenous cultural expression, for example in the case of the former kingdom one can speak of a 'Northumbrian Renaissance'. The question to be asked is whether these local identities survived beneath the changing political make-up of England in the coming centuries, and accordingly, whether there is any evidence of a loosening of cultural and artefact boundaries in a period of increasing political centralisation and unification.

2.3.2 Explaining material culture patterning

The study of material culture from this period may be enriched if we can begin to bridge the gap between artefact types and their distributions to social and cultural meaning. Late Anglo-Saxon strap-ends embody a number of qualities which enable research to explore the relationship between artefact variability and social context.

Because strap-ends were personal objects and so an intrinsic part of an individual's appearance, they represent a likely medium for the expression or assertion of aspects of their owners' social identity. Consequently, one of the striking features of the data is the wealth and diversity of decorative styles they attracted. In this context, because such objects were highly visible, they may have been particularly valuable in the sphere of non-verbal communication (Wobst 1977; Hodder 1982; Kaiser 1985; Joseph 1986). This is especially the case in an era when the majority of the populace was illiterate and so would have been more sensitive and receptive to stylistic messaging. Implicit in this statement is the active role of material culture and the styles in which it is manifest in mediating social behaviour and interaction. As such,

artefacts and the styles in which they are embellished carry ethnic and cognitive meaning, in the words of Shanks and Tilley (1987, 142):

> Material culture is assumed to passively reflect individual or ethnic identities. It is quite possible that precisely the contrary situation may take place, in which style is actively manipulated to invert, disguise and misrepresent social practices. Furthermore, style cannot be held simply to mirror social strategies and practices but can also mediate and therefore serve to actively reorientate these strategies.

At this point, it should be explicitly stated that 'style' may be used to describe not only the decorative aspects of strap-ends, but morphological, and hence functional, attributes also. It has long been acknowledged that previous attempts to divide the two into mutually exclusive aspects of an artefact have been seriously flawed on a number of theoretical premises (Shanks & Tilley 1987, 58; Jones 1997, 110-12). Current academic consensus calls for an awareness of the fact that stylistic references may equally reside in the non-decorative aspects of an artefact. In other words, there may be as much stylistic information encoded in the size and shape of a strap-end as in the obvious decorative features (Sackett 1977).

A behaviourist approach to the study of stylistic patterning, viewing style in its broadest sense 'as a way of doing', allows one to adduce information concerning groups, boundaries and levels of social interaction (Wiessner 1989). Both Wiessner and Hodder (1982) have undertaken ethnographic research highlighting the active role of style in social behaviour. These suggest that, depending upon the cultural and historical context, style can either be used to express individual (assertive) or group (emblemic) identities (Weissner 1983). Within this model, a high level of inter-group competition may be expressed stylistically by a high level of intra-group homogeneity. In such a situation, one might expect regional styles and artefact boundaries to conform to cultural boundaries.

In a situation where there is a high level of group interaction, other factors such as status and sex may play a more important role in influencing artefact and style patterns. This may be particularly relevant, if, as has been suggested, Late Anglo-Saxon England was becoming increasingly 'unified' politically (Hodder 1982, Chapter 4). What we may be observing in the great diversity of strap-end styles is the expression or 'assertion' of individual or regional identities on an artefact whose widespread use objectified a more common identity. In other words, stylistic messaging may be working at more than one level. Other studies focusing on style have arrived at a similar conclusion. DeBoer's ethnographic study of Conibo-Shanibo pottery, for instance, illustrates that within emblemic stylistic traditions there is always room for experimentation and the 'assertive' expression of style (DeBoer 1990, 103). Weissner (1984) has also shown how different artefacts within the same culture can express stylistically both assertive and emblemic identities. Of relevance is Richards' study of the stylistic variability of Anglo-Saxon cremation urns. He suggests that at the level of individual artefact, or even specific artefact attribute, the context of an object's use and display will alter stylistic messaging (Richards 1988, 146). For example, aspects such as general form and decorative composition may identify a cremation urn as Anglo-Saxon, while finer details of decorative motif may transmit more detailed points of social role, such as status and sex.

In the context of the period covered by this research, one aspect of style worthy of exploration is the role it may play in state societies, or at least emergent ones - terminology applicable to Late Anglo-Saxon England. Many of the archaeological and ethno-archaeological studies on style as described above have been biased towards the study of simple egalitarian societies and within these, the focus is on one or two artefact classes only. Within increasingly complex societies, several artefact classes, or even attributes on the same artefact, may encompass a diverse range of stylistic messages, each with its own social referent. For example, an artefact might include styles expressive of personal, social or regional identities, or communicate information about an individual's membership of the particular society as a whole.

2.3.3 Material culture and social status

The great range in quality represented by the strap-end database is testament to an object that, in transcending status boundaries, must have been familiar to most, if not all, strata of contemporary society. This quality has the potential to illuminate the various social relations associated with these objects' production and use. Sinclair, in a study of 18th-century silver candlesticks, explains how the production of poorer-quality brass examples, modelled on their precious counterparts, may have been related to the aspirations of an emergent middle class consciously emulating the material trappings of the social elite (Sinclair 1987, 53). Similarly (as noted above), during the Late Anglo-Saxon period, silver and gold objects had their humbler counterparts in base metals as the jeweller turned to a wider range of materials to satisfy the tastes and purses of his lower status customers. This emulation may also relate to the styles in which these models were decorated. De-luxe silver and niello strap-ends, for example, are commonly decorated with crisply executed Trewhiddle-style ornament, whereas much of the database is composed of lesser-quality copper-alloy examples decorated with the bungled attempts to copy these superior artefacts.

Again, this wish to emulate the styles of superior quality artefacts may be controlled and knowingly manipulated by elites in an attempt to resolve ambiguity and disguise social contradiction and inequality. Barthes (1973,141) states that the initial impact of a message is the most important aspect; it does not matter if, on reflection, the message is exposed as a cynical piece of propaganda. An effective means of control involves employing skilled craftsmen to encode artistic products with symbolic messages that convey the elite point of view (Brumfiel et al. 1987, 9). Could the secular elites and rising states in England be partly responsible for the rise and dominance of the Trewhiddle style during the 9th century? Certainly, it would be in the state's interests to promote cultural homogeneity in the formulation of positive 'national' identity. Hodder, in his study of the Lozi of Western Zambia, has highlighted the effect of state control on material culture (Hodder 1982), concluding that the presence of a strong and fully-developed state umbrella may be associated

with a lessening of inter-tribal differences (ibid., 119). Within complex societies, there are also greater opportunities for social groups, particularly elites, to manipulate artefact styles to legitimise and popularise the perception of particular identities for ideological and political ends. This development has been explored in New World archaeology (e.g. Earle 1990).

Using two case studies, Hawaiian and Olmec chiefdoms, Earle illustrates how material goods can be used to mask relationships of inequality in systems of increasing social stratification and complexity (Earle 1990, 74). Despite a general homogeneity, local styles continue to be important in defining community membership, for example, distinctive community and ethnic dress is characteristic of closed corporate peasant communities. Moreover, the state may become covertly involved in promoting ethnic distinctions among the populace, establishing a climate in which the peasantry are divided by tradition and are in competition for stately favour. Importantly the state also becomes increasingly involved in the semi-industrial manufacture of special goods with uniform styles that function both as status markers and as a means of payment. From the perspective of my research, these models offer further potential explanation for the apparent dichotomy between homogeneity in strap-end form on the one hand and diversity in strap-end decoration on the other.

2.3.4 Material culture and Ethnicity

Ethnicity is a concept that has been central to archaeological interpretation from the discipline's very beginnings. Unfortunately, its past use as an interpretative tool has been dogged by traditions of nationalism and by the difficulties of understanding the contemporary meanings and uses of ethnic terminology (Geary 1983, 16). There has recently been a conceptual shift from considering ethnic origin as an objectively determinable aspect of the archaeological record, to viewing ethnic groups as self-conscious/self-defining social entities, which are based on the subjective perception of real or assumed cultural difference. This view has been expounded by Geary in a

paper on Early Medieval ethnicity in which he states (1983, 16):

> One concludes that ethnicity did not exist as an objective category but rather as a subjective and malleable category by which various pre-existing likenesses could be manipulated symbolically to mould an identity and a community

The hyper-objectivity associated with past interpretations of ethnicity often resided within the paradigm of culture-historical archaeology which assumed that bounded, monolithic cultural entities ('archaeological cultures') correlate with past races and ethnic groups. This view has been subject to a number of critiques within various theoretical schools over the past thirty years and today ethnicity is approached from a much more subjective, self-aware stance (Jones 1997, Chapter 6). One of the most important conclusions to come from a review of these criticisms is that ethnicity is a fluid and dynamic phenomenon which may change spatially and temporally, often as a result of the strategic manipulation of identity in relation to economic and political factors.

Ethnicity has been an important focus for the interpretation of stylistic variability, and some of the major conceptual developments in understanding how style functions in societies (described above) have been adapted to research specifically focusing on ethnic identity. Most important in this respect is the proposition that ethnic identity may have been projected in a conscious 'assertive' fashion through a process of social and cultural comparison (see Shennan 1989, 17-22).

Within this model, material culture is frequently implicated in the expression and reproduction of particular ethnic identities, as Jones explains (1997, 120):

> Certain aspects of material culture may become involved in the self-conscious signification of identity, and the justification and negotiation of ethnic relations. As a result, distinctive forms and styles of material culture may be

actively maintained and withheld in the process of signaling identity, whilst other forms and styles may cross-cut ethnic boundaries.

In the context of this research, the study of ethnicity is particularly relevant to the period of Viking settlement in the British Isles. This historical phase is represented in the metalwork assemblage by an influx of artefacts of Scandinavian origin and decorative objects of British manufacture, which reflect the influence of contemporary Viking art styles. The latter are largely comprised of artefacts decorated with motifs representative of the Viking Borre style, current during the most concentrated phase of Scandinavian settlement during the last third of the 9th and first half of the 10th centuries (Richardson 1991, 1992; Margeson 1996; Chapter 7). Particularly prominent amongst this material are standardised forms of strap-end and disc-brooch, which on distributional evidence and on the identification of debased and sometimes hybridised Borre-style motifs, are argued to have been manufactured and circulated among Anglo-Scandinavian communities of the eastern Danelaw (Chapter 7).

A likely explanation for why these, above other contemporary dress accessories, were adopted as Anglo-Scandinavian fashion is provided by archaeological evidence which attests to the general use of both artefact categories in Anglo-Saxon England and the Scandinavian homelands prior to the advent of Viking colonisation (see Chapters 7 and 8). Conversely, there is evidence to suggest that dress-accessories such as paired oval brooches, which represented a uniquely Viking fashion in terms of their form and the way in that they were worn, were abandoned relatively early on by Scandinavian colonists. As a result, they appear to have played a relatively minor role in the process of stylistic transfer and assimilation.

From a theoretical perspective, the evidence discussed above presents a possible case for the selective use of material culture as a means of facilitating the process of cultural integration and assimilation. Shennan and others have argued that, because within certain social contexts culture evidently develops into a self-conscious marker,

the quickest way for an alien population to assimilate would be to mask or hide those aspects of its material culture most likely to project ethnic or cultural differences (Shennan 1989).

Paradoxically, however, there are some indications that during the early phases of Scandinavian colonisation other aspects of social behaviour and material culture may have served to strengthen links with the immigrants' cultural past. The most evocative manifestations of such links revolve around the religion of the new settlers, aspects of which can be gleaned through iconography on contemporary sculpture, pagan mortuary practices, and the use of amuletic objects such as Thor's hammers.

Richards' recent re-interpretation of the cremation cemetery at Ingleby, near Repton in Derbyshire, has thrown light on this particular social phenomenon. He interprets the explicitly pagan characteristics of the cemetery as an expression of 'Vikingness', stating that (Richards et al. 1995, 66):

> The Ingleby burials might represent a deliberate and physically imposing allusion to the pagan homeland of those who produced them; a statement of religious, political and military affiliation in unfamiliar and inhospitable surroundings.

Despite the above, taking into account the various strands of evidence, the picture is one of cultural assimilation during a relatively short period. A study of contemporary metalwork suggests that artefacts attributable to a Scandinavian origin, either on stylistic grounds, or, as in the case of oval broooches, because they reflect the burial of individuals in Scandinavian dress, are far outweighed by those displaying a fusion and cross-fertilisation of styles redolent of a mixed 'Anglo-Scandinavian' cultural milieu. Combined with the fact that the use of strap-ends transcended cultural boundaries, the above factor renders it impossible to assign much of the material displaying Scandinavian affinities in this thesis to a specific ethnic category. In many cases such an expectation may itself be misguided given

that the view subscribed to here is one where ethnic identities are constructed out of subjectively defined perceptions of real or assumed cultural differences. By extension, within the following study it is not envisaged that the use of a Borre-style strap-end or strap-end with Borre-style affinities would have necessarily identified its owner as an ethnic Scandinavian. Its use within an Anglo-Scandinavian context does suggest, however, that individuals, of either an Anglo-Saxon, Scandinavian, or mixed Anglo-Scandinavian background, wished to identify themselves with this particular cultural tradition and it's material idioms.

2.3.5 Art and aesthetics

The final part of this theoretical discussion focuses upon the aesthetic quality of Late Saxon and Viking-age strap-ends as a potential means of exploring their role in contemporary society. As above, the conceptual basis for this discussion is influenced by the theory that artistic media, as a constituent of material culture, may signal social identity through visual messages, in the words of Hodder (1982, 174), "artistic expression is a non-discursive mode of communication that may be used to 'say' things that may not be 'said' openly". With this in mind, a study of the decorative techniques, motifs and iconography represented on strap-ends has relevance to an understanding of the syntax of signs, symbols, and icons encoded within the rich visual language of Late Anglo-Saxon and Viking-age art (Wilson 1984).

Because the capacity of artistic media to communicate visual messages is mediated by the aesthetic responses it may elicit from a viewer, it is useful to explore how strap-ends related to the general range of aesthetic ideals and tastes characteristic of the period. It is possible to reconstruct these tastes, not only through a study of the artistic media itself, but, as Dodwell has masterfully demonstrated (1982), also through an examination of contemporary documentary evidence. In light of the above, some of the aesthetic qualities most pertinent to Late Anglo-Saxon strap-ends are presented.

A love of brightness, surface reflectivity and contrasting colours is particularly evident from contemporary literary sources and metalwork, including strap-ends. A preference for variable brightness is attested in contemporary documentary evidence, such as the description of a peacock written by St Aldhelm, in which he emphasises the iridescence of colours (quoted in Dodwell 1982, 34):

> The peacock, the beauty of whose feathers now grows golden with a saffron hue, now blushes red with a purple sheen, now shines with a bluish depth of colour or glows with the tawny glint of gold.

The use of contrasting metals and decorative inlays - such as enamel and niello - on a large number of strap-ends were certainly designed to produce these aesthetic qualities. A good example is the silver strap-end pair from Ipsden Heath, Oxon, which have gold filigree panels providing a striking colour-contrast with the surrounding silver metal (cat. no. 430). A copper-alloy strap-end from York (cat. no. 732, Fig. 3.16E) takes the use of metal inlays to the extreme, using a combination of brass wire, silver and copper inlays in the depiction of a male human figure (Wilson 1964b). The group of strap-ends decorated with inlays of niello and silver wire also illustrates this point admirably.

N. F. Barley has drawn attention to the richness of the Anglo-Saxon colour vocabulary, which he suggests emphasised the light-dark axis of colour perception to a greater degree than does our own (Barley 1974). This opposition between black and white, and light and dark, was used as metaphor in contemporary literary works. In Beowulf, for example, lively mead-halls are described as 'light', while gloomy wastelands are referred to as 'dark'. These distinctions were imbued with a further level of symbolic abstraction with their associations with good and evil in the repertoire of Christian imagery.

This may have direct relevance to the popularity of silver and niello decoration on

9th century ornamental metalwork. The combination of silver with the black silver sulphide inlay produces a suitably striking visual effect for conveying such hidden imagery. Silver strap-ends are almost universally decorated with niello inlays, as is a significant proportion of the lower status copper-alloy examples. It is worth noting that the juxtaposition of black and white is also a common feature on contemporary illuminated manuscripts such as the Canterbury Bible and Cotton Tiberius C.ii (Wilson 1984, 94).

Central to the repertoire of early medieval art was the depiction of animals, whether naturalistic, or in more abstract sinuous forms, often combined with interlace or plant motifs (see Chapter 6). The design and decoration of the majority of Late Saxon strap-ends are a material embodiment of this aesthetic taste. The predominant 9th-century type is characterised by its distinctive zoomorphic terminal, in the form of an animal head seen from above. Moreover, animals are intrinsic to the Trewhiddle, Winchester and Anglo-Scandinavian art-styles used to decorate the majority of Late Saxon strap-ends. It is important to bear in mind that such representations are likely to have had symbolic meanings, as Morphy explains (1989, 14):

> When animals are transformed into art they often become reflections on the human condition...in using animals for certain purposes and encoding them in particular ways people inevitably effect the concept of an animal they have.

Within Anglo-Saxon society, the rich bestiary of animal representations is likely to have worked at various levels of symbolic meaning. As allegorical figures, for example, they may have been used as symbols of religious belief, or to commemorate an individual, his or her family and their social status (see Hicks 1993, 5).

As alluded to above, interlace is often used as a decorative device on strap-ends and contemporary artistic media, often in conjunction with animal and plant motifs or less commonly on its own. Although the purely decorative qualities of interlace are readily apparent, (for example, its adaptability to confined ornamental fields), it has

been argued that it could also convey symbolic and iconographic meanings. (Kitzinger 1993). Knots may have amuletic qualities, warding off evil spirits and when used in conjunction with animals, interlace may have also served to empower and heighten the supernatural forces associated with them. Kitzinger warned of the temptation of placing too much emphasis on these symbolic explanations, stressing the importance of the contexts and particular media with which the interlace is associated. It may be particularly pertinent to this study, however, that he considered personal ornaments as one of the most likely vehicles for carrying these allegorical messages (ibid., 4).

Although the small size of strap-ends precluded the portrayal of detailed iconographic and narrative imagery, a significant number illustrate a growing preoccupation with secular iconography in Late Saxon art. Several strap-ends, decorated with explicitly secular human figures, often in tandem with interlace or plant motifs, suggest that this trend, previously recognised on predominantly higher-status pieces of contemporary ornamental metalwork such as the Fuller brooch and the Abingdon sword (Webster in Webster & Backhouse 1991, cat. no. 257; Hinton 1974, cat. no. 1) had filtered down onto artefacts of more common, everyday usage (see also Williams 1997). It has been suggested that the root of these wider artistic developments lay in an increased awareness of the intellectual content of decoration, perhaps triggered by a growing spiritual emphasis within the church on the God-given nature of man's physical being (Webster in Webster & Backhouse 1991, 268).

2.4 Summary

The opening section of the chapter presented the limits and scope of the research, by defining the subject matter and the various constraints under which it has been subjected, including those both consciously imposed by, and beyond the control of, the researcher.

A justification for the classification used in the current study was then established on

a number of methodological grounds. Firstly, it was envisaged that to have general applicability to a wide range of users, including non-academics, practicality and simplicity should be central to the system. A comparison with typologies of the Early Anglo-Saxon period highlighted the potential limitations of the 'instrumental' uses of a typology constructed upon the data used here, particularly as a tool for fine dating. Despite this, a typology of these artefacts has considerable potential to elucidate regional patterning within the database, as explored in Chapter 7. The diversity of the strap-ends covered by this research, combined with uneven levels of survival and recording, has also called for a less complex classificatory procedure reliant upon basic visual criteria, many of which are relevant to art-historical categories applied to the period.

A theoretical *excursus* focused upon a study of style as a potentially useful conceptual tool for enhancing future interpretation of variability amongst the corpus of Late Saxon and Viking-age strap-ends (see Chapter 9). The major assumption underpinning this theoretical approach is the role style may play - as a form of non-verbal communication - in expressing contemporary social, regional or 'ethnic' identities. In regards to the latter, discussion highlighted the theoretical pitfalls of assigning strap-ends displaying 'external' stylistic attributes to particular ethnic categories, especially in relation to the theme of Scandinavian settlement in the British Isles. The concluding section of the chapter emphasised the relationship of the decorative and artistic qualities of Late Anglo-Saxon and Viking-age strap-ends to the visual symbolic language of contemporary artistic media gleaned from a study of contemporary documentary and art-historical evidence.

CHAPTER 3: A CLASSIFICATION OF LATE SAXON AND VIKING-AGE STRAP-ENDS

fication of the strap-ends recorded in the checklist which accompanies this ıata into twelve major morphological ıg. 3.0), these are as follows:

zoomorphic terminals and an average

afts, zoomorphic terminals and an

(ioned shafts, various terminals and a

D) various terminals

E) ... average ratio of width to length of 1:2.

F) Double-sided split-end strap-ends with decorative roundels and zoomorphic terminals

G) Split-end strap-ends and openwork shafts in the form of Urnes-style zoomorphic interlace

H) Unclassified Anglo-Scandinavian strap-ends

I) Composite strap-ends formed from a curving front-plate with a stylised zoomorphic terminal and sheet back-plate

J) Folded-metal strap-ends

K) Split-end strap-ends in the form of an animal head seen from above

L) Unclassified strap-ends

Each main class is further sub-divided, depending upon the degree of variability displayed by its members. The classificatory hierarchy progresses to types, which are based upon additional morphological and/or decorative characteristics, sub-types by a consideration of the compositional elements of decoration and finally, groups which relate to more detailed aspects of these compositional elements.

The accompanying scatterplot (Diagram 3.1) compares the relationship between the length and width of 650 complete strap-ends. The differences apparent in such a comparison reflect, to some extent, the eleven main morphological classes listed above. Particularly evident are narrow, Class C strap-ends and class J, simple folded-sheet strap-ends which are appreciably shorter than others recorded in the survey. Although there is overlap between the three most populous classes of strap-end, A, B and E, they do have mutually exclusive ranges. Strap-ends belonging to Class A are shorter and wider than B, while class E examples are the broadest.

Accordingly, these morphological differences, expressed as the average (median value) of the ratio of width to length, are used as a defining attribute for Classes A, B, C and E. Within classes, the value of grouping strap-ends by dimension lessens, a glance of the scatterplot comparing the dimensions of the five major types of class A strap-end (Diagram 3.2), for example, reveals no significant differences. Because of this, variables relating to dimension have not been used for defining types and sub-types within classes.

To facilitate the reader and to avoid lengthy descriptions in the accompanying checklist (Appendix 1), the characteristic features of the strap-end groups are described in detail during the following. Specific examples are highlighted with accompanying illustrations if deemed particularly interesting or representative of the group being discussed. Unclassified strap-ends are described within their respective catalogue entries in Appendix 1.

3.2 Class A: Split-end strap-ends of convex form with zoomorphic terminals and an average ratio of width to length of 1:3.5

This class represents the commonest variety of Late Saxon strap-end, accounting for nearly 63 per cent of the database. It is characterised by a number of distinctive morphological and decorative features, which were copied in each case with varying degrees of competence. Diagnostic elements include their overall form, most commonly being convex, though there is considerable variation with some being more elongate and parallel-sided (e.g. cat. no. 407, Fig. 3.7D) and others more sub-triangular in appearance (e.g. cat. no. 432, Fig. 3.10B). The primary attachment feature, the split-end, is most commonly pierced by two rivets for attachment, though a single rivet was used in some cases. At the opposite end, the terminal takes the form of an animal's head, seen from above, with particular attention focused upon the facial features including the ears, eyes and snout. Another stylistic trait is the elaboration of the area between and below the rivets at the split-end by a fan-shaped field, often decorated by what is referred to as a 'trilobate palmette'. This is a foliate motif composed of sub-triangular 'pot' which in some cases projects beyond the upper edge of the split-end. From this, a central stem emerges between the rivets from which issues a pair or pairs of leaves, itself terminating in a centrally disposed leaf or bud.

The representation of both the zoomorphic terminals and palmettes was subject to considerable stylisation and adaptation, affected both by the competence of the craftsman and local tastes and fashions, aspects of which be discussed below

(Chapter 7). This has resulted in a bewildering array of individual styles rendering these decorative zones and, unless conceived as a pair, two strap-ends rarely share the same terminal or split-end features. In some instances, one can identify standard methods of simplifying or stylising these features. One common method of simplifying the palmettes, for example, was to substitute the individual leaves with an incised diagonal cross resting within an arc or semicircle (e.g. cat. no. 362, Fig. 3.6E). Another was the use of punched or incised lunate incisions. The same trick was also employed on the terminals, where single examples or columns of these incisions are used to represent ears and eyes (e.g. cat. no. 648, Fig. 3.15B).

Another distinguishing feature of the class is the tendency to restrict the main panel of decoration to the front face of the strap-end. The expanded front faces offered the main focus for artistic expression manifest in a diverse range of ornamental styles and techniques. A stylistic breakdown of these various arrangements of decoration forms the backbone of the internal classification of this class of Late Saxon strap-end. Five types are identified on this basis: 1) Trewhiddle-style; 2) Geometric; 3) Anthropomorphic; 4) Enamelled; and 5) Silver-wire.

In most instances, the stylistic composition of the decoration forms the primary sorting attribute, as the same styles were often executed in a variety of techniques and materials. Trewhiddle-style decoration, for example, may be incised, engraved and then elaborated with various inlays such as silver, niello or enamel. On the other hand, certain decorative techniques are associated with their own distinct, stylistic vocabulary. This includes the decoration associated with enamelled and silver-wire strap-ends. Where necessary, split-end and terminal features are also highlighted to illustrate equivalent stylistic attributes. The types presented are as follows:

3.2.1 Type 1: Trewhiddle-style

This rather general term is used for convenience to refer to strap-ends whose decoration is related to the 'Trewhiddle style', a style which has long been recognised as a defining characteristic of much of the ornamental metalwork dated to the 9th century (Brønsted 1924, passim). During the course of the 9th century, and arguably into the 10th, the Trewhiddle style enjoyed unrivalled prominence in the decoration of high-class metalwork and on the evidence of frequent attempts to copy its motifs in cheaper metals, it was a fashion to which most of the populace aspired.

The same degree of eminence is also suggested by a study of the strap-end corpus. There exists, for example, an intimate relationship between silver strap-ends and crisply-executed Trewhiddle-style motifs, exemplified by those discovered in the aforementioned hoards. However, this is not to deny that the same levels of artistic accomplishment were attainable in other metals, the quality of the decoration on some copper-alloy strap-ends, such as that from Westmeston, E. Sussex, on occasion surpassing silver examples (cat. no. 390, Fig. 3.6G). Similar care was also taken to reproduce the terminal and split-end features on de-luxe Trewhiddle-style strap-ends, and it is on such examples that one can identify most elaboration, with attention to detail such as the use of glass or enamel insets for eyes and additional fields of decoration on their brows (e.g. cat. no. 328, Fig. 3.5D).

Discussion will now turn to presenting, in summary fashion, the defining characteristics of the style, beginning with the most general through to more specific, compositional elements. The repertoire of individual motifs will be discussed in more detail to highlight chronological patterns in Chapter 6. First and foremost is the tendency to divide the surface of the metal into smaller fields by borders which are commonly beaded, billeted or nicked to imitate beading. In the case of strap-ends, their small size often precludes the division of the main panel into smaller fields, though this is a feature of particularly high-status examples (see A1b, iii). Beaded borders are, however, a common feature of Trewhiddle-style strap-ends where they

are used to decorate the edges of their front faces (e.g. cat. no. 242, Fig. 3.1B) A stylised attempt to render beaded borders is also evident in sub-group A1b, i, in the form of a pair of touching billeted chords which define two lentoid-shaped fields of decoration within the main panel (e.g. cat. no. 491, Fig. 3.12C).

A wide and ever increasing repertoire of motifs is associated with the style, ranging from animals and plants depicted in various degrees of naturalism and interlace, sometimes depicted singly within their own frames, or in combination with each other. A distinctive stylistic trick, which imparts a certain degree of roundness and/or movement, is the nicking or speckling of the individual motifs (e.g. cat. no. 242, Fig. 3.1B).

The bestiary of animal forms range from semi-naturalistic birds and animals through to more sinuous snake-like beasts depicted in profile. These may be depicted singly within a field or, less commonly, two or more may intertwine or interlace with one another. When occurring singly, the animals may adopt a variety of postures, usually dictated by the shape of the field in which they are enclosed. Particularly common are crouching animals looking forward or with their heads turned backwards over their shoulders.

Foliate motifs range from the depiction of complete plants through to individual leaves which are often used as appendages to animals and interlace. Other foliate motifs are more formalised, good examples being the symmetrical potted-plants and four-leafed rosettes which occur on such objects as the Abingdon sword (Hinton 1974, cat. no. 1), and the rings from Poslingford, Suffolk (Wilson 1964a, cat no. 61, fig. 29, pl. XXVIII), and Hoen, Norway (Wamers 1985, cat no. 128, taf. 30, 1).

Interlace is used far more frequently in conjunction with zoomorphic and foliate motifs than it is on its own. When occurring in its pure state, as within fields on the larger of the Beeston Tor brooches (Wilson 1964a, cat. no. 3, pl. XI), the Abingdon sword (Hinton 1974, cat no. 1, field no. 19) and on several strap-ends within the

survey, it is usually of a simple, closed form involving two plaits (e.g. cat. no. 475, Fig. 3.11D). When used in conjunction with zoomorphic and foliate motifs, however, the interlace may sometimes form more intricate patterns.

The two sub-types presented below represent a division of Trewhiddle-style strap-ends into those with either a) single or b) multiple fields of decoration. The first are sub-divided into twenty groups by consideration of the character of the motifs and their particular disposition within fields. Multi-field strap-ends are sub-divided into three groups on the basis of the number of fields used: two, four, or more than four. Examples which are either too fragmentary, corroded or crudely-executed to attribute to sub-types based upon detailed compositional elements, are ascribed the general sub-type, A1.

Sub-type a) Strap-ends with a single field of decoration

This includes strap-ends with decoration consisting of one or more Trewhiddle-style motifs within a single decorative field on the main face of the strap-end. There is considerable variation in the style and quality of the motifs represented by the twenty groups presented below.

i) Single right-facing animal with head facing forward towards the split-end (Fig. 3.1)

Among this group of nine strap-ends is the decorated silver pair from the Trewhiddle hoard (cat. no. 237) and the fine silver specimen of Whitby, N. Yorks (cat. no. 242, Fig. 3.1B). A particular trick associated with animals belonging to this group is the use of chin lappets, which, in the case of the Cornish pair, terminate in foliate leaves (Wilson 1964a, figs 43 & 44). In almost all instances, the animal is depicted in a crouching pose with legs bent beneath the body, the Whitby example being the exception with a hind-leg which returns to pierce the body of the animal diagonally.

ii) Single left-facing animal with head facing forward towards the split-end (Fig. 3.1)

The majority of the fifteen strap-ends with which this design is associated display a high degree of stylistic homogeneity. Decoration consists of speckled crouched animals with gaping mouths and chin lappets which have become detached to form small discrete elements sandwiched between the animal's chin and an outstretched forepaw. At the rear of the animal, behind the tail, sits a second subsidiary sub-zoomorphic feature, worm-like in appearance. Others display more diversity and degrees of stylisation, an interesting development being the segmented formalised design on a strap-end from Stevenston Sands, Ayrshire, Scotland (cat. no. 252, Fig. 3.1D), a form of simplification repeated elsewhere in the corpus of Trewhiddle-style strap-ends.

iii) Single right-facing animal with head turned backwards to face the terminal (Fig. 3.2)

A particular stylistic trait of the animals belonging to this group of eleven strap-ends is the use of hindquarters which return to pierce the animal's body diagonally, ending in a paw beneath the animal's chin. This motif is also subject to stylisation, with more abstracted versions having segmented anatomical features.

iv) Single left-facing animal with head turned backwards to face the terminal (Fig. 3.2)

This is a particularly common group with twenty-five representatives, and incorporates a variety of versions. One involves a sinuous animal with oversized, disproportionately large limbs, a curling tail and neck ending in a stylised head. In each case, the animal is inlaid with enamel (e.g. cat. no. 289, Fig. 3.2C). The use of strands of foliate interlace also distinguishes some members of the sub-group; this often issues from the animal's mouth to pierce the body, as in the case of the strap-ends from the Talnotrie, Dumfries & Galloway, Scotland, and Lilla Howe, N. Yorks

(cat. nos 273 & 293, Figs 3.2B & E). An interesting version of this design is exhibited by one of the Ipswich strap-ends which is executed in openwork, a rare decorative technique for this class (cat. no. 291, Fig. 3.2D). The body of the animal in this case has lateral 'ribbing' and a frog-like head closely matched by the animals on the aforementioned pair of strap-ends from Lilla Howe. Like the sub-groups presented above, animals associated with this group are prone to stylisation into segmented linear forms, as illustrated by a strap-end from Hauxton Mill, Cambs (cat. no. 272).

v) Single left-facing animal with head turned backwards to face the split-end (Fig. 3.3)

A small sub-group represented by two strap-ends within the corpus, from Asby, Cumbria (cat. no. 294, Fig. 3.3A) and Whitby, N. Yorks (cat. no. 295). Both incorporate a small animal in ungainly pose, with the foreleg twisted beneath the neck of the animal. In the case of the Cumbrian example, the animal's body is speckled.

vi) Single upright animals facing the terminal, with heads in various positions (Fig. 3.3)

A group of five strap-ends is associated with this motif. Individually, the motifs display considerable diversity, the head of the animal may be thrust backwards in various directions, for example. The dog-like creatures belonging to this group are particularly naturalistic, that on the Harling strap-end (cat. no. 299, Fig. 3.3C) being particularly reminiscent of the beast on King Æthelwulf's ring (Webster in Webster & Backhouse 1991, cat no. 243).

vii) Large-eared looping animal with subsidiary snake-like beast (Fig. 3.3D & E)

This group has been previously discussed in detail by Bailey (1993). It is a particularly homogeneous group, suggesting a single source of manufacture, if not from the same model, a proposition also indicated by their distribution (Chapter 7). The survey has identified additional examples to the nine presented in Bailey's article, with the total now standing at thirteen. To recap, the main features are a looping animal with a head placed to the left-hand face of the field facing towards the terminal. The head features a large looped ear, dotted eye and gaping mouth. The neck of the animal forms a break in the loop of the animal's body which continues below to form a second subsidiary beast located towards the bottom of the panel. This also features a head with a dotted eye and gaping mouth and has a single limb. Both animals are speckled. Three small punched angular annulets are used as space fillers, one in the centre of the field between the animals and the other two placed in diagonal corners of the field.

The ambiguity of this design, which may be interpreted as a single animal with two heads or else two discrete animals, is in keeping with contemporary tastes. Double-headed animals feature elsewhere in the corpus (group viii) and on northern Trewhiddle-style metalwork, including a pair of strap-ends from Lilla Howe (cat. no. 417. Fig. 3.8D) and the multi-headed creatures on the Scales Moor, Ingleton, sword pommel from N. Yorks (Wilson 1964a, cat. no. 65, fig. 32). Bailey failed to mention the use of inlays in association with this group of strap-ends, albeit they are missing from some of the representatives cited by him (e.g. cat. no. 308, Fig. 3.3D). Split-end and terminal features are also matched in each case, featuring a simple engraved trilobate palmette and animal head with oval ears, bulging lentoid eyes, and defined nostrils.

viii) Looping animal pierced by double-contoured interlace ending in a second animal head (Fig. 3.4)

Individual members of this group have been discussed previously, by Wilson (1964a, 32, fig. 3), Taylor and Webster (1984, 180) and Richardson (1990), though their decoration has not been described in detail until now. They, like those in the group above, are close enough in design and decoration to be considered products of the same source of manufacture. Apart from sharing the same looping palmettes and terminals with comma-shaped ears (which are themselves independent features characterising some strap-ends produced north of the Humber), the design incorporating a two-headed animal is also matched. This involves a central, upright nicked animal which stands at the bottom of the panel and has its front leg raised to the right-hand corner of the field. The feet are double-splayed and each has a raised tail with a bifurcated terminal. Above the raised leg, the body and neck loop round to produce a head with its nose tucked into the left-hand corner of the upper frame. The head has a dotted eye, a chin lappet and gaping mouth. A curving extension behind the head completes the loop which encloses a double-contoured plait emerging beneath the animal's body to form a loop ending in a second animal head. This is larger than the first and sports a gaping mouth, dotted eye and bumped nose. Gaps within the panel are filled by smaller dotted filler-elements. The decoration is inlaid with niello. Four representatives of this class are recorded in the survey, of which three are crisply executed (cat. nos 314, 315 & 317, Figs 3.4A, B & D) the fourth from Doncaster, S. Yorks, being less confident and thus likely to be a copy (cat. no. 316, Fig 3.4C).

ix) Other single animal forms with looping bodies (Fig. 3.5A)

This represents a diverse group, the designs represented on individual examples varying considerably, except for the fact that the animals depicted have looping bodies. An unprovenanced example in the B.M. is clearly related to group A1a, xviii, having a speckled animal in the same looping pose and disposition (cat. no.

321). It differs, however, in that it lacks the double-contoured plait and the second head is replaced by a subsidiary snake-like animal with a dotted eye, similar to the smaller animals on Group A1a, vii. Its terminal and split-end features also differ, being more akin to traditional southern styles of representation (see Chapter 7). Other members display increased stylisation of individual features, the characteristic looping body being the main, recognisable feature.

x) Single animals enmeshed in interlace (Fig. 3.5)

The eight strap-ends belonging to this group, distinguished by the use of interlace to enmesh animals, are rare in comparison to those in which the interlace is treated separately, (see group A1a, xii). Within this group are three strap-ends which most likely emanate from the same source of manufacture, an identification strengthened by their northern distribution. These examples, from Glenluce Sands, Dumfries & Galloway, Scotland (cat. no. 323), Cottam, N. Humb (cat. no. 324), and Whitby, N. Yorks (cat. no. 329), are characterised by a sprawling animal with a head pointing towards the top left-hand corner of the field. The animal's body is both pierced by, and enmeshed in, confused, double-contoured interlace with sub-foliate extensions. Other shared features include a well-executed trilobate palmette with a small horseshoe incised on the central leaf. A further example from the site of Whitby, N. Yorks (cat. no. 330), is likely to represent a confused copy of this design.

Two finely executed members of this group from Flixborough, S. Humb, share several stylistic features suggesting that they may derive from the same workshop (cat. nos 325 & 326, Fig 3.5B & C). These include the use of a similarly disposed sinuous beast, with a looping body from which issue distinctive lappets extending into the top corners of the field. In both cases, the interlace disengages from the animal to form triquetra knots within the field. Each strap-end also features nicked borders and a similar trilobate palmette, though the terminals are treated differently.

Also included within this group is an exceptionally fine trio of silver and niello strap-ends from West Rudham, Norfolk (cat. no. 328, Fig. 3.5D). Although the decoration differs in detail on each, their shared morphology and stylistic pedigree indicates that they were made by the same hand. Each is decorated with a similar naturalistic canine beast pierced by interlace which disengages from the animal's body to form intricate, sub-foliate, interlacing patterns. The terminals also share the same elaboration of the brow and nose region by the addition of foliate palmettes and drilled eyes to take glass insets.

xi) Single stylised animals enclosed within border square billets punched centrally (Fig. 3.6)

Two main versions exist within this group of thirteen strap-ends, members of which are closely related in the design of their main panel of decoration and other stylistic features. The first is distinguished by having disproportionately large zoomorphic terminals with comma-shaped ears and transverse mouldings above their brows (e.g. cat. no. 342, Fig. 3.6C). The main panel of decoration is sub-triangular in shape and surrounded by a frame of square billets punched centrally. The animals contained within this field differ in each case, some being more stylised than others, ranging from a simple worm-like creature with a dotted eye, to the Whitby example, where the animal has been abstracted to a triangular element (cat. no. 343). Both the frame and the decoration within are inlaid with niello or enamel.

The second variety, more numerous than the first, differs in the form of their terminals and also their main panels of decoration which are replaced by a square field enclosed on all sides by a frame of billets (e.g. cat. no. 336, Fig. 3.6A). As in the case of the first variety, the animal forms contained within the fields are highly stylised, often being depicted as contorted, segmented creatures with dotted eyes. Inlays are also commonly used to highlight the decoration.

Mention should also be made of the two pairs of silver strap-ends from the Lilla Howe hoard, N. Yorks, which also have decorative borders of punched annulets (cat. no. 417, Fig. 3.8D) These are, however, classified elsewhere on the basis of their elaborate zoomorphic ornament.

xii) Single animals degenerating into interlace (Fig. 3.6)

The designs which characterise this popular group of fifty-one strap-ends conform to one of two main versions. The commonest consists of an animal placed at the top of the panel with extremities such as tails and hindquarters which degenerate into a panel of interlace located below. The animal used in each case varies considerably, though the majority, like those on strap-ends from Wroxeter, H & W, Flixborough, S. Humb, and Westmeston, E. Sussex (cat. nos 353, 362 & 390, Fig 3.6D, E & G), are disposed in backward-looking postures. The interlace used in each case also varies in detail, though it usually conforms to a closed two-strand plait design. Split-end and terminal features also vary appreciably from one example to the next.

In another variety, which displays more homogeneity than the former, a very stylised animal consisting of a head element with dotted eye and a simple body is placed at the bottom of the field such as those from Cottam, N. Humb (cat. nos 355 & 356). Both the interlace, which develops from the limbs of the animal towards the top of the panel, and the animal, are speckled.

xiii) Indecipherable single animals

This group includes strap-ends decorated with a field containing a single animal that is either too stylised, confused or fragmentary to allow attribution to one of the prescribed groups above.

xiv) Two or more interlacing animals (Figs 3.7 & 3.8)

The use of two or more animals provided a useful stylistic basis for experimenting with interlace and entwined bodies. The complexity of the designs associated with this group of eighteen strap-ends necessarily implies status, and many are indeed of excellent quality in silver and niello. The quality of the group is also reflected in the often crisply executed and elaborate terminal and split-end features.

Three main varieties exist within the group. The first and most popular involves a symmetrical design of two confronted animals which intertwine at various points to form a panel of interlace below. There is considerable variability in the form and posture of the animals, as also in the degree to which they interlace with one another. In some cases, such as Linton, Cambs (cat. no. 405, Fig. 3.7B), and Lewes, E. Sussex (cat. no. 414, Fig. 3.8A), the animals are small and placed at the very top of the panel. In other instances, the bodies of the animals are more sinuous and snake their way down most of the panel; examples include strap-ends from Great Massingham, Norfolk (cat. no. 410, Fig. 3.7G), and Østebø, Sweden (see Appendix 2, Fig. 6.3B), with a particularly fine representative coming from Wendover, Bucks (cat. no. 404, Fig. 3.7A). In the case of an unprovenanced strap-end in the B.M., the number of animals has been doubled to four, though the design maintains a symmetrical arrangement of confronted beasts with the main panel of interlace located below (cat. no. 416, Fig. 3.8C)

In the second, interlace is absent, though the animals continue to intertwine with one another to varying degrees. Two closely related examples of this variety come from Middle Harling, Norfolk (cat. no. 408, Fig. 3.7E) and York (cat. no. 419). Both strap-ends are decorated with a pair of speckled animals intertwined at the neck, midway along their bodies and, finally, at their rear-legs, though corrosion obscures the design at this point on the York example. On a strap-end from Walpole St Peter, Norfolk, the pair of collared confronted animals entwines only at their mouths at the top of the panel (cat. no. 411), while in the case of a fine strap-end from Soham,

Cambs (cat. no. 406, Fig. 3.7C), the pair of confronted animals engraved onto the silver inlay remains separate, though they are pressed tightly together to form a mirror image of one another.

A further category is reserved for strap-ends decorated with a non-symmetrical arrangement of two or more beasts enmeshed in or surrounded by interlace. Only two examples are recorded in the survey, though both are of silver and of superb craftsmanship. The first is one of a possible pair from Bamburgh, Northumberland, (cat. no. 412, Fig. 3.7H). In this instance, the worn decoration has been X-rayed, revealing a design of three lively, naturalistic, nicked and speckled beasts, one above the other. Both are pierced by strands of sub-foliate interlace issuing from their tails and mouths. In the case of the central animal, its tail develops into a second subsidiary animal head.

The same lively, almost impressionistic, style is also associated with a silver strap-end of unknown provenance from N. Yorks (cat. no. 418, Fig. 3.8E). This bears two heavily nicked animals in the longitudinal plane of the strap-end. The neck and body of the smaller pierce the hindquarters and leg of the larger animal, placed above, which turns its head backwards to face its junior cousin. Both beasts are surrounded by extremely fine looping interlace.

xv) Foliate ornament with paired leaves and buds issuing from central stems (Figs 3.9 & 3.10A)

This motif represents one of the most developed expressions of Trewhiddle-style foliate ornament and the seventeen strap-ends with which it is associated are mostly high-status examples in silver, with elaborate terminal and split-end features. The most crisply-executed renditions occur on a trio of silver strap-ends from Ashill, Norfolk (cat. no. 426, Fig. 3.9C), a further Norfolk example from Stibbard (cat. no. 426), and an unprovenanced example from Suffolk now in Moyses Hall Museum, Bury St Edmunds (cat. no. 431, Fig. 3.10A). A description of the Ashill trio provides

a useful summary of the distinctive features. Each is provided with a central stem which grows from a cup-shaped basal bulb. Side-shoots and buds issue from the stem which swells at various points to form cup or trumpet-shaped calyxes. The stem terminates in a central lobed leaf, flanked by elaborate bifurcating leaves which issue trailing stems terminating in fruiting bodies. All the features are speckled and some also nicked to suggest roundness. The same motif occurs with slight modifications on the other examples cited; the Suffolk strap-end, for example, lacks the elaborate trailing fruit, seen elsewhere on East Anglian Trewhiddle-style metalwork such as the Pentney brooches (Webster in Webster & Backhouse 1991, cat. nos 187a & b).

The same motif is treated in varying degrees of stylisation on other strap-ends within the corpus, from fairly recognisable copies, such as on strap-ends from Portchester, Hants (cat. no. 421, see Fig. 6.5C), and Shropham, Norfolk (cat. no. 425, see Fig. 6.4D), to more formalised or sketchy versions such as those on specimens from Winchester, Hants (cat. no. 422), and Chichester, W. Sussex (cat. no. 432, Fig. 3.10B). The same motif, in a simplified form, also forms the basis for the placement of the inlaid gold panels on a strap-end from High Easter, Essex (cat. no. 421, Fig. 3.19A).

In its most abstract form, the motif is reduced to a series of cup or trumpet-shaped calyxes stacked one upon the other and flanked by pairs of scrolled leaves, such as the design on an enamelled example from Shernbourne, Norfolk (cat. no. 427). The gold filigree panels on the pair of strap-ends from Ipsden Heath, Oxon (cat. no. 430, Fig. 3.9B), also make use of this simplified version, which is particularly suited to the medium of wire. In a few instances, the motif is reduced even more through the omission of the scrolled leaves so the central element of calyxes is all that remains.

xvi) Pairs of curling pointed leaves (Fig. 3.10

The lanceolate leaf, which is often elaborated with double nicking, is one of the standard features of Trewhiddle-style foliate ornament and is used on thirteen Trewhiddle-style strap-ends. Some are decorated with a symmetrical design of two or more pairs of these nicked leaves, as for example, on one of the strap-ends from Hamwic (cat. no. 433) and another from Weston, Herts (cat. no. 434), which also displays curling leaf-stalks. An interesting design on a strap-end from Uffcott Down, Wilts (cat. no. 440, Fig. 3.10C), incorporates pairs of these downward-pointing leaves within the scheme of a more elaborate plant-stem motif, as characterised by the preceding group. In one instance, on a strap-end from Stain, Lincs (cat. no. 436), the symmetrical design is replaced by three leaves developing from a central stem in the manner of fields of foliate decoration on the Sittingbourne seax (Wilson 1964a, cat. no. 81) and the larger of the Beeston Tor brooches (ibid., cat. no. 3).

xvii) Symmetrical design incorporating a quatrefoil rosette with lateral buds (Fig 3.10A & B)

Another foliate motif associated with this class of strap-end consists of a symmetrical rosette of four curling leaves interspersed by either two or four lateral buds. In some cases, the leaves are marked with internal contours. This design, as found on a number of strap-ends, has a close parallel on some of the decorative fields on the Abingdon sword (Hinton 1974, cat no.1, field nos. 1 & 23), though less developed versions, consisting of just two leaves, occur on the Poslingford (Wilson 1964a, cat no. 61, fig. 29) and Hoen rings (Wamers 1985, cat no. 128, taf. 30, no. 1). It appears in its most confident state on strap-ends such as those from Hamwic (cat. no. 444, Fig. 3.10E), and an unprovenanced example recorded at Bonhams, London (cat. no. 445, Fig. 3.10F), where the design has been pierced by four circular holes. The terminal and split-end features associated with strap-ends decorated with this design vary from one example to the next, though their terminals all belong to the southern variety (see Chapter 7).

xviii) Stylised design incorporating pairs of leaves (Fig. 3.11A)

The motifs which characterise this group are closely related to the foliate designs on objects such as the the Poslingford ring (Wilson 1964a, cat no. 61, fig. 29) and the Burghead horn-mount (Graham-Campbell 1973b, fig. 19e). Representatives are either provided with a single motif, as in the case of a strap-end from Bottisham, Cambs (cat. no. 446) and Ashby-de-la-Launde, Lincs (cat. no. 447, Fig. 3.11A), or with several, as illustrated by two closely related strap-ends from Torksey, Lincs, which are most likely products of the same source of manufacture (cat. nos 449 & 450).

xix) Single field of simple interlace (Fig. 3.11)

This group includes strap-ends decorated with a single panel of interlace. This refers to decorative designs in which interlacing strands form the major component of the decoration without any obvious zoomorphic features. However, strap-ends decorated with interlacing strands terminating in foliate elements, such as curling shoots and leaves, are included within this group.

Most of the strap-ends decorated with single panels of interlace employ a simple, two-strand variety to form closed knot patterns. Other stylistic features associated with strap-ends decorated with this motif vary widely, though (perhaps significantly) only one, from South Kelsey, Lincs (cat. no. 464), has a terminal in the northern tradition. The length of the patterns also varies considerably, the shortest being a lentoidal duplex on a strap-end from Trowbridge, Wilts (cat. no. 475, Fig. 3.11D), extending to the paired knot on an example from Bawsey, Norfolk (cat. no. 468), to the longer, more repetitive, designs which are by far the most common, as displayed on numerous strap-ends such as those from Bulwick, Northants (cat. no. 470).

Occasionally, the number of interlacing strands is increased, as in the case of the four on a strap-end from South Newbald, N. Humb (cat. no. 461, Fig. 3.11B).

xx) Elaborate interlace (Fig. 3.11E & F)

This group is reserved for strap-ends decorated with interlace designs, which depart from the simple patterns described above. This includes a strap-end from Congham, Norfolk, decorated with eccentric looping foliate interlace which sprouts curling shoots and terminates in leaves (cat. no. 478, Fig. 3.11F). The idiosyncratic looping interlace on an unprovenanced silver-gilt strap-end recorded at Bonhams, London, indicates an 8th-century dating (see Chapter 7).

Sub-type b) Multifield Trewhiddle-style strap-ends (Fig. 3.12)

This sub-type consists of strap-ends with their main panel divided into two or more fields occupied by individual Trewhiddle-style motifs. The use of multiple small fields has been noted as a defining characteristic of the style and as such, is achieved on strap-ends in a variety of ways, some being highly distinctive and found only on this particular class of artefact. The sub-type is divided into groups defined by the number of fields used in each case, either i) two, ii) four, and iii) or more than four. Fragmentary examples, which cannot be attributed to one of these groups, are ascribed to the general sub-type A1b.

i) Two fields of Trewhiddle-style decoration (Fig. 3.12)

This popular group of thirty-nine strap-ends is distinguished by a decorative panel separated into two fields of decoration. The group comprises two main designs. The first is characterised by the use of pairs of touching billeted borders which meet in the middle and bifurcate at the top and bottom of the panel. Subsidiary sub-triangular fields are sometimes inserted into the apex created by the bifurcation (e.g. cat. nos 491 & 502, Fig. 3.12C & D) The exact shape of the borders varies, some

being more curvilinear and others more rectilinear. The form chosen affects the shape of the fields which they define, the former producing semi-circular or lentoidal fields and the latter sub-triangular or trapezoidal ones. The motifs which inhabit each of the fields vary considerably, all being very stylised in appearance, with very few depicting recognisable Trewhiddle-style motifs. In many cases, they are inlaid with enamel, silver or niello. The terminal and split-end features are often similarly stylised.

The second design is related to the first in the use of a central border which bifurcates at the top and bottom of the panel to create a pair of trapezoidal fields. The decoration differs, however, in the elaboration of the area of the bifurcation by incised chevrons and the use of pairs of symmetrically disposed, Trewhiddle-style animals with dotted eyes (e.g. cat. no. 519, Fig. 3.12E) Two varieties exist, those with a single animal contained within each field, such as that displayed on a strap-end from Andover, Hants (cat. no. 498) and those with a pair in each (see below). The quality and definition of the animals used varies, though care is usually taken to depict the eyes. One of the most accomplished examples of this decoration is illustrated by a strap-end from Chelmondiston, Suffolk (cat. no. 519, Fig. 3.12E), which clearly displays two pairs of small backward-looking beasts with crouching bodies and heads with square snouts and dotted eyes. As with the former variety, the terminal and split-end features are often highly stylised.

ii) Four fields of Trewhiddle-style decoration (Fig. 3.13)

This group comprises twenty strap-ends which have the main panel divided into four decorative fields, each occupied by Trewhiddle-style motif. Members of this group vary greatly, from the motifs used, to the style of the borders which divide the panel up. In the case of the latter, they are often adapted to represent cruciform motifs, as in the case of those on strap-ends from Buckingham (cat. no. 529, Fig. 3.13A), Dymchurch, Kent (cat. no. 536, Fig. 3.13B), and the Cuerdale hoard, Lancs (cat. no. 539). A variety of motifs is represented, some being exclusively foliate and others of

foliate and zoomorphic interlace, the sinuous looping form of the foliate interlace on strap-ends from Lode, Cambs (cat. no. 530), Long Wittenham, Oxon (cat. no. 544), and Buckingham (see above) being closely related. The majority, however, incorporate zoomorphic motifs which develop into interlace. Particularly fine exponents are those from Dymchurch, Kent (cat. no. 536, see above), Cuerdale, Lancs, and St Mildred's Bay, Thanet, Kent (cat. no. 537, Fig. 3.13C).

The degree of precision required to render such decoration on the restricted surfaces of these strap-ends is in many cases exceptional and is thus indicative of the highest quality. This also accounts for the large dimensions of some members of the group. It is no surprise that the split-end and terminal features associated with this group are in many cases crisply executed and elaborate. Particularly distinctive is the owl-like terminal on an unprovenanced Herts strap-end in the B.M. (cat. no. 534). The oval protuberances which characterise the terminal of this particular example are a feature associated with other high-status multifield Trewhiddle strap-ends (see cat. no. 551, Fig. 3.13E).

iii) More than four fields of Trewhiddle-style decoration (Fig. 3.13)

This group is reserved for the six Trewhiddle-style strap-ends with a main panel divided up into more than four decorative fields. Members display considerable diversity, with the number of fields used ranging from five to eight. Like other multi-field strap-ends, they are mostly high-status with a high level of accomplishment in the execution of their terminal and split-end features. One of the finest examples is from West Wycombe, Bucks (cat. no. 551, Fig. 3.13E). This is decorated with four pairs of oval fields, each occupied by a single, well-defined Trewhiddle-style beast. The palmette and terminal are both elaborate and crisply executed, the latter being closely related to cat. no. 534, which may indicate a common source of origin.

3.2.2 Type 2: Geometric

Strap-ends classified under this heading are characterised by the use of geometric decoration which is usually incised onto the front of the strap-end. Less frequently the designs are engraved more deeply to accommodate inlays of niello, silver or enamel. The simplicity of many of the motifs is repeated in the stylised terminal and split-end features. The type has been divided into nine sub-types based upon the design elements which form the overall patterns.

a) Curvilinear (Fig. 3.14)

This is a common sub-type with twenty-seven members. It is characterised by decoration composed of arcs and other curvilinear elements. A common design, used on strap-ends such as the example from Peterborough, Cambs (cat. no. 582, Fig. 3.14A), consists of a central longitudinal line bounded on either side by a symmetrical layout of conjoined, confronted arcs. In other cases, the central line, if present, separates a pattern of arcs which rests on the borders at the edge of the main panel. These are often double-contoured and enclose a central arc which curves in the opposite direction to the ones by which it is bounded. Smaller arcs are also used to bridge the gap at the apex created where pairs of arcs conjoin panel (e.g. cat. no. 598, Fig. 3.14B).

b) Step designs often enclosed by roundels (Fig 3.14)

This sub-group is closely related to the first but may be distinguished by the use of step motifs often in conjunction with prominent roundels. Of the total of eight representatives recorded in the survey, over half have been discovered in Scotland, a distribution explored more fully in Chapter 7. In each case, the design differs slightly. On the Scottish examples (cat. nos 613-616, Fig. 3.14D, E & F) and the strap-end from Great Wakering, Essex (cat. no. 609), the step motifs are enclosed by incised roundels clearly set out using a compass. On the London and Cottam

examples, however, the step designs are used in conjunction with double-contoured curves in the manner of Sub-group A2a (cat. nos 610 & 612, Fig. 3.14C).

A distinctive stylistic trick associated with some members of the Sub-type is the depiction of a pair of animal's eyes within the overall design, as in the case of the aforementioned example from London.

c) Chevrons (Fig. 3.14G)

This sub-type is characterised by the use of incised chevrons to decorate the main field. These are often placed at the top and bottom of the panel creating a pair of central trapezoidal fields. The possibility exists that some members of the sub-type represent a degenerate version of the two-field Trewhiddle-style group of strap-ends described above (Type A1b, i), the individual zoomorphic motifs being completely abstracted to a linear design (e.g. cat. no. 617, Fig. 3.14G).

d) Other angular patterns (Fig. 3.15A)

This sub-type includes strap-ends decorated by geometric designs composed of a variety of angular motifs. Some are decorated by a central column of diamonds or lozenges flanked by chevrons, as, for example, that from Gooderstone, Norfolk (cat. no. 634, Fig. 3.15A). A strap-end from West Rudham, Norfolk, is decorated with a pair of curving borders filled by a double-contoured zigzag (cat. no. 637). Others are more simplistic, an example from Whitby, N. Yorks, being decorated in the centre of its main panel with a pair of deeply incised triangles (cat. no. 639).

e) Crescents (Fig. 3.15B & C)

This sub-group comprises two main varieties. The simplest involves two columns of incised or punched crescents either side of a central, longitudinal line. The crescents may either be placed on edge, with their backs facing the centre or the edge of the

panel, or stacked one above the other, the latter appearing on a strap-end from Glenluce Sands, Dumfries & Galloway, Scotland (cat. no. 640). The second variety consists of columns of conjoined crescents which interlock with one another as illustrated by strap-ends from Barnetby and Flixborough, S. Humb (cat. nos 648 & 649, Fig. 3. 15B & C).

f) Circles with pellets (Fig. 3.15)

Five strap-ends are decorated with a single circle or columns of touching circles, divided into quadrants, the interior of which are filled by single or paired pellets (e.g. cat. no. 659, Fig. 3.15D). The centre of the cross which defines the quadrants may also be provided with a small diamond with a central pellet. The strap-ends associated with this design are closely related, all have beaded edges and clearly represented terminals and palmettes, although the number of circles used in the design may vary from one to three.

g) Hatched longitudinal panels

Three strap-ends recorded in the survey have two crudely hatched longitudinal fields separated by a central border. In two closely related examples, the central border is beaded and extends onto the zoomorphic terminal. On an example from Shenley Church End, Bucks, the design is inlaid with enamel (cat. no. 660).

h) Lattice designs (Fig. 3.15E)

A popular sub-type with fifty-one representatives is characterised by the use of a central field occupied by closely spaced diagonal lines which bisect one another to form a lattice. In some cases, the design is inlaid with enamel or silver. In a few examples, the lattice could represent 'keying' for the addition of an inlaid setting (Evison 1980, 34), but if this were the case then the lattice would have been applied to a recessed surface, yet most are applied directly on to the surface of the metal.

The terminal and split-end features associated with this sub-type are usually highly stylised, often using punched arcs to represent individual attributes such as ears. Some examples of the sub-type, such as that from Fishergate, York (cat. no. 713, Fig. 3.15E) have a characteristic form consisting of a lentoid-shaped central panel and expanded split-end.

In most cases, the field of lattice-work is framed within an incised border; less frequently however, it is contained within a border of conjoined arcs, such as those used on strap-ends from Hod Hill, Dorset (cat. no. 666), or of billeting, as in the case of a strap-end from Ramsbury, Wilts (cat. no. 707).

i) Ring-and-dots (Fig. 3.15F & G)

Punched ring-and-dots are a common decorative feature on Mid-Late Saxon metalwork, and appear elsewhere in the strap-end corpus (see Type E4 below). The examples which comprise this sub-group like those of Type A2 generally are of modest quality and display stylised split-end and terminal features. The ring-and-dots form various patterns, ranging from a simple cruciform arrangement as those on a strap-end from Walpole St Peter, Norfolk (cat. no. 721), through to longitudinal columns like those on an example from Pot Ridings, S. Yorks (cat. no. 725, Fig. 3.15G). On a strap-end from Upavon, Wilts (cat. no. 724, Fig. 3.15F), the individual ring-and-dots are inlaid with enamel.

3.2.3 Type 3: Anthropomorphic (Fig. 3.16)

This type comprises strap-ends decorated with anthropomorphic representations on their main panels. The six strap-ends belonging to this class differ substantially in dimensions and other stylistic features, including the anthropomorphic representations themselves, which range from the depiction of a face through to one or more complete figures.

An example from Hainford, Norfolk (cat. no. 729, Fig. 3.16B), is incised with a crude circular face with circular ears and a large club-like nose. The mouth is formed by a simple transverse incision. Examples from Cheriton, Hants, Brandon, Suffolk and Tanner Row, York (cat. nos 728, 730 & 732, Figs 3.16C & E), are decorated by standing nude male figures, in the case of the former two, with arms raised aloft by the sides of their heads. In the latter instance, only the right-hand arm is raised. The decoration is executed in different techniques. The Brandon example is incised, while the York and Cheriton examples make use of decorative inlays. The figures are in each case accompanied by other representational motifs. The York figure is flanked by Trewhiddle-style animals, Brandon by sub-foliate elements and Cheriton interlace. The figures are crude in each case with bald oval heads, but with eyes, eyebrows, mouths and chins clearly depicted. Torsos, phalli, limbs with hands and feet are also clearly represented.

A strap-end recently discovered near Cranborne, Dorset (cat. no. 727, Fig. 3.16A), is decorated with a full-length clothed male figure portrayed plucking fruit from a tree or vine. The imagery, figure's pose, and attire, consisting of a knee-length tunic fastened about the waist by a girdle, is closely paralleled by the carving on the cross-shaft from Codford-St-Peter, Wilts (Wilson 1984, fig. 252), and to a lesser extent by the figure on the Abingdon sword (Hinton 1974, cat no. 1, field no. 3). The relationship between these objects is discussed more fully in Chapter 7.

A strap-end from Selsey, W. Sussex, meanwhile, is decorated with four clothed seated figures in individual fields defined by a central cross (cat. no. 731, Fig. 3.16D). The use of such a device is clearly related to the design of the multifield Trewhiddle-style strap-ends, A1bii. Unfortunately, the photographs of this lost strap-end do not allow a detailed commentary on the design of the figures. The top two face each other and the bottom pair face away. They are depicted in semi profile, with their near arms bent at ninety degrees across their laps. The figures in the top left-hand and bottom right-hand fields have rear arms raised to the sides of their heads. All appear to be seated, a stool or chair is clearly depicted in the top left-hand

panel. The heads carry little detail, though there is the suggestion of hair on the top left-hand and bottom left-hand figures. All four figures are clothed in knee-length tunics and wear pointed shoes in the manner of the figures on the Abingdon Sword (Hinton 1974, cat no. 1, field no. 3), the Fuller brooch (Wilson 1964a, cat no. 153, pl. XLIV) and the Codford cross, Wilts (Wilson 1984, fig. 252), and clearly belong to the same artistic tradition.

3.2.4 Type 4: Enamelled (Fig. 3.17)

This category of strap-end is characterised by the use of inlaid panels of enamel. It is sub-divided into three sub-types based upon the number of fields of enamel used, those with one, two or four. An additional sub-type is reserved for strap-ends decorated with a distinctive pattern of punched annulets inlaid with enamel. The type displays considerable diversity in the execution of their terminals and palmettes. Although some are crisply executed, none match the elaborate features associated with some Trewhiddle-style strap-ends. Occasionally, additional fields of enamel are used to decorate their terminals, such as the rectangular ears on a strap-end from Ryther, N. Yorks (cat. no. 766, Fig. 3.17C). Enamel-inlaid chevrons are also used on the brows of some terminals as in the case of an unprovenanced strap-end from Essex (cat. no. 747, Fig. 3.17A). To avoid misattribution, strap-ends which have lost their enamel inlays are placed within a respective sub-type of both enamel and silver-wire strap-ends type A4/5.

a) Single sub-rectangular field

This sub-type comprises strap-ends decorated with a single sub-rectangular panel of enamel. In most cases, the enamel inlay is missing revealing a recessed panel with a keyed upper surface. Most examples display considerable diversity in the representation of terminal and palmette features, though they are usually stylised.

b) Two sub-rectangular fields (Fig. 3.17B & C)

This is the commonest of the sub-types, though many have missing inlays so that they have been attributed to Type 4/5b to allow for those examples which may have held inlays of niello and silver wire. The terminals and palmettes associated with this sub-type are usually stylised, having rows of punched lunate incisions to represent individual features.

c) Four fields (Fig. 3.17D)

Five strap-ends recorded in the survey are decorated on their main panels with four fields of enamel inlay. Two of the examples, from Ruskington, Lincs, and Congham, Norfolk (cat. nos 768 & 770), have beaded borders and elaborate terminals, while an unprovenanced example in Moyses Hall Museum, Bury St Edmunds, has incised outer borders with scrolled terminals and an enamel-inlaid chevron on its terminal (cat. no. 771, Fig. 3.17D).

d) Annulets (Fig. 3. 17E)

Eight strap-ends, including an example from Poundbury, Dorset (cat. no. 773, Fig. 3.17E), are decorated on their front panels with a distinctive motif of closely spaced annulets which are punched centrally. In each case, the area between the annulets and their punched centres is inlaid with enamel. In all cases, the terminal and palmettes are crudely executed. On a variant from Bawsey, Norfolk, the design is divided into two fields by a longitudinal border (cat. no. 778).

3.2.5 Type 5: Silver-wire (Figs 3.18 & 3.19)

The use of a decorative inlay of silver-wire scrollwork set into niello, or less commonly, enamel, characterises Type 5; the technique is described in detail in Chapter 5. A total of ninety-three strap-ends has been positively identified as

belonging to this type, with an additional twenty-six having empty recessed panels which could originally also have had similar settings. The latter have been classified as A4/5 to account for the possibility that they might instead have originally carried enamelled decoration. As with the enamelled strap-ends, the type is divided into sub-types based upon the number and nature of the fields used, ranging from one or two sub-rectangular fields through to designs of three tear-shaped fields, of several fields and of a centrally placed circular field.

Stylistically, the individual scrollwork patterns and motifs are remarkably consistent, most usually consisting of combinations of confronted S-scrolls punctuated by occasional small horseshoe-shaped elements, the latter being used to fill in any undecorated spaces in the niello/enamel. Occasionally, the S-figures are substituted by other curvilinear motifs, including heart and U-shapes as seen on the strap-end from Waldringfield, Suffolk (cat. no. 850, Fig. 3.18G). Meanwhile, those strap-ends with multiple panels of this decoration illustrate how the interplay of individual scrollwork motifs on adjacent fields can sometimes produce lively symmetrical patterns.

A peculiarity of this type is the use of additional settings at the split-end and/or zoomorphic terminal. In the former, the fields take on the traditional fan-shaped appearance, while at the terminals the fields are often diamond-shaped and placed on the brow, in some cases extending downwards onto the snout (e.g. cat. no. 868, Fig. 3.19B). Although in some cases individual examples are closely related, overall the type displays considerable diversity in form and stylistic elements, such as their terminals.

a) Single field (Fig. 3.18)

The second most popular manifestation of the type, with twenty-four positively identified representatives, consists of strap-ends characterised by the use of a single main field of niello and silver-wire decoration. The exact shape of the decorative

field varies, though most are roughly sub-rectangular in outline. The stylistic features and detailed form of the strap-ends, with which this decorative sub-type is associated, varies considerably, though some patterns are apparent which will be described below.

One stylistic feature associated with some members of the sub-type is the use of scalloped edges, the centre of each scallop being provided with a lunate recess (e.g. cat. no. 788, Fig. 3.18A). Seven examples display this feature, though one should note that it is also used sparingly outside the type, as for example on a strap-end from Icklingham, Suffolk (cat. no. 385). When used on the silver-wire variety, four pairs of scallops are usually represented. The terminals associated with these specimens are of an elaborate form with large oval ears, bulging eyes and elongated snouts. In all but two examples, their brows are decorated with small diamond-shaped fields of inlay.

One example, from Heacham, Norfolk, is significant in that it is provided with a pair of zoomorphic heads, one in the traditional location, at the terminal, and the other facing in the opposite direction at the split-end (cat. no. 794, Fig. 3.18B). In the case of the latter, the head is split and pierced by a centrally placed rivet through the snout. The distinctive feature is unparalleled elsewhere within this class of strap-end, though it is a stylistic trait belonging to the Anglo-Scandinavian group of strap-ends B4c (see below).

b) Two longitudinal fields (Fig. 3.18)

This is the most popular of the sub-types of silver-wire strap-end, with forty representatives. Like the first sub-type, they display considerable diversity in details of form and decoration, though some individual members fall into smaller groups on this basis. One such group is characterised by the use of confronted pairs of S-scrolls within each of the longitudinal fields (e.g. cat. no. 827, Fig. 3.18E), in other cases

outside this grouping, single columns of scrolling motifs are restricted to each of the longitudinal fields (e.g. cat. no. 841, Fig. 3.18F).

Another closely related group of strap-ends belonging to this sub-type has a distinctive form of terminal, with oval ears incised with both lunate and tear-shaped recesses, large lentoid eyes and short rounded snouts (e.g. cat. no. 850, Fig. 3.18G).

c) Three tear-shaped fields (Fig. 3.19)

A distinctive decorative layout restricted to this type is the use of three tear-shaped fields of inlay which appears on eighteen strap-ends recorded in the survey inlcuding those from West Caister, Norfolk (cat. no. 855, Fig. 3.19A) and Lakenheath, Suffolk (cat. no. 868, Fig. 3.19B). The sub-type is more homogeneous, with respect to detailed form and stylistic attributes, than the other sub-types presented above. Nearly all are of squat scarab-like dimensions and carry foreshortened zoomorphic terminals commonly with sub-rectangular panels of inlay on their snouts and circular ones on their ears.

This sub-type appears in two main varieties: those in which all three fields are placed with their pointed ends facing the split-end as on the aforementioned Norfolk example (cat. no. 855); and those where the point of the centrally-placed field faces the terminal in diametric opposition to the two outer fields (cat. no. 868, Fig. 3.19B). In most cases, the individual settings are all inlaid with S-scrolls, either occurring singly in combination with a circular scroll, as on a strap-end from Boxted, Suffolk (cat. no. 863), or as pairs placed one above the other (see cat. no. 855).

d) Several fields (Fig. 3.19)

This category is reserved for strap-ends of the silver-wire variety decorated with several fields of inlay (in both cases more than four). Two strap-ends recorded in the survey belong to this sub-type. The first, from Great Melton, Norfolk (cat. no. 871,

Fig. 3.19C), is provided with three pairs of sub-rectangular fields separated by a central longitudinal border. Unfortunately all the inlays are missing, revealing the keyed surface of the recessed metal in each field. The only inlay to survive is on the elaborate zoomorphic terminal which contains lunate fields within its ears and a elongated lozenge-shaped panel on its brow. Within the fields on the ears small pellets of wire are used, whereas the latter contains a single U-shaped scroll in combination with a zigzag and pellets.

The second example, from Royston, Herts (cat. no. 870), is decorated with a central diamond-shaped field flanked on all four sides by larger quadrangular ones. In addition, a pair of semi-circular fields are placed, facing inwards, at the top and bottom of the panel. The original silver-wire and niello inlays survive only in the central and bottom right-hand fields.

e) Circular fields

Two strap-ends recorded in the survey, from Bixley and Wreningham, Norfolk (cat. nos 872-3) are decorated with a prominent circular field of niello and silver-wire inlay. In each case, the outline of the strap-end bulges to accommodate the circular field which is placed immediately above the zoomorphic terminal. Both are also related in the use of a large fan-shaped field of inlay at their split-ends. The terminals are treated slightly differently on each example, though they are equally well defined with oval ears and punched eyes to receive glass insets.

3.3 Class B: Split-end strap-ends with parallel-sided shafts, zoomorphic terminals and an average ratio of width to length of 1:4.5

This class comprises nearly 13 per cent of the database with 170 members. In its use of split-ends for attachment and a zoomorphic terminal, this class is clearly related to Class A strap-ends. They differ in that they are of longer, narrower proportions, the ratio of width to length being 1:4.5. They usually have parallel-sided shafts, often

semi-circular in section, with flattened wedge-shaped split-ends. The zoomorphic terminals, though of a similar form to that of Class A strap-ends, are usually more stylised, often using facets to represent facial features.

This class is usually much plainer than its shorter Class A counterpart, the classic design consisting of a series of transverse incisions or mouldings at either end of the shaft below the split-end and above the terminal. This stereotypical form, with this horizontal banded decoration, are ascribed the general class heading, 'B'. Unlike Class A strap-ends, only a small percentage are associated with inlaid decoration, a notable exception being the strap-ends belonging to Type 2, and the inlaid iron strap-ends from, Ramsbury, Wilts, and St Albans, Herts (cat. nos 967 & 978). Those which are decorated with more ambitious designs, or are of a specific form, are considered under eight main type headings: 1) Trewhiddle-style; 2) Silver-wire scrollwork decoration; 3) elaborate shafts; 4) Multi-headed; 5) Interlace; 6) Animal-head terminals designed to be viewed side on (in profile); and 7) Hooked terminals.

3.3.1 Type 1: Trewhiddle-style (Fig. 3.20)

The use of Trewhiddle-style decoration on Class B strap-ends is far more limited than on Class A examples, occurring on only ten recorded in the survey. Because of this fact, the individual motifs which appear in this class are considered under a single type heading. These range from simple interlace through to zoomorphic and foliate motifs, restricted within a small field occupying the expanded surface of the split-end. On occasion, this field is accompanied by a palmette in the same manner as on Class A strap-ends. Other features associated with the style, such as the use of beaded borders and niello inlays, are occasionally found on members of the type, as on examples from Cheddar, Somerset (cat. no. 980, Fig. 3.20C) and Winchester, Hants (cat. no. 977).

Five examples are decorated with zoomorphic motifs, the aforementioned example from Cheddar degenerates into a single knot of interlace. A single example from

Whipsnade, Beds (cat. no. 973, Fig. 3.20B), is decorated with an enamel-inlaid design, consisting of a formalised potted-plant motif in the manner of those used on the Burghead horn-mount (Graham-Campbell 1973b, fig. 19) and Poslingford ring (Wilson 1964, cat no. 61, fig 29). Four, meanwhile, are decorated with simple, interlacing motifs, such as the duplex on a strap-end from Bishops Cannings, Wilts (cat. no. 982).

3.3.2 Type 2: Silver-wire (Fig. 3.20)

Three strap-ends belonging to Class B are decorated with settings of niello and silver wire. Two closely-related examples from Ringstead, Norfolk and Barham, Suffolk (cat. nos 984-5, Fig. 3.20E) have fan-shaped fields of inlay at their split-ends and longitudinal panels on their shafts, inlaid with U and S-scrolls in the same manner as the settings associated with Type A5 strap-ends. An unprovenanced example from Essex, however, departs from the usual repertoire of wire scrolls and is, instead, decorated on its shaft by three narrow fields of niello, each inlaid with a single undulating strand of silver wire (cat. no. 983, Fig. 3.20D). The damaged split-end on this example would originally have carried a sub-rectangular panel of inlay, which is now missing.

3.3.3 Type 3: Elaborate shafts (Fig. 3.20)

Five strap-ends belonging to Class B have central shafts which have been elaborated with various decorative motifs. Two from Caister-by-Norwich and Methwold, Norfolk (cat nos 990-1, Fig. 3.20F), have circular facets, three placed longitudinally on the former and a single central facet on the latter. Circular motifs, in the form of central roundels flanked by transverse mouldings, meanwhile, are used on strap-ends from Maltby, Lincs (cat. no. 989), and Kent (cat. no. 987). In the case of the former, the roundel is decorated with an incised rosette motif.

One of the most distinctive members of this type is a large strap-end from Bledlow, Bucks (cat. no. 986), the shaft of which is engraved with a centrally-placed Maltese cross. Another example from Northampton has incised chevrons which meet in the middle to touch a central horizontal band (cat. no. 992). The shaft on a strap-end from Bardney, Lincs, meanwhile, has a pair of angled facets along its length (cat. no. 988).

3.3.4 Type 4: Multi-headed (Fig. 3.21)

This distinctive group of strap-ends is characterised by the elaboration of the shaft with one or two animal masks in addition to that which forms the terminal. The split-ends associated with this type are plain and usually pierced centrally towards their upper edge by a single rivet, the exception being sub-type E4d. The style of heads used differs from those associated with Class A strap-ends and other types within Class B. Crisply-executed examples from Cottam, N. Humb (cat. no. 999), and Hurly Hawkin, Grampian, Scotland (cat. no. 1005, Fig. 3.21A), use modelled animal heads with rounded 'bear-like' ears, circular eyes and rounded snouts which have their closest parallels amongst those used on the corpus of Scandinavian and Anglo-Scandinavian metalwork (see Chapter 6). The heads are stylised to varying degrees, a common stylistic trick being the replacement of moulded features by punched dots and arcs (e.g. cat. no. 1011, Fig. 3.21C). The heads are depicted in various dispositions and a breakdown provides the basis of an internal classification of the series into four sub-types: a) two confronted heads; b) single head facing the terminal; c) opposing heads at each end of shaft; and d) abstracted heads.

a) Two confronted heads (Fig. 3.21)

The most popular manifestation of this type comprises sixteen strap-ends, having shafts decorated with a pair of confronted animal heads. These occupy the entire length of the shaft below a wedge-shaped split-end and above the terminal, which is

separated from the lowermost head by an undecorated zone of metal (see cat nos 1005 & 1009; Fig 3.21A & B).

b) Single head facing the terminal (Fig. 3.21)

Another variant consists of a single animal head placed below the split-end with its snout lowermost, facing the terminal. Three strap-ends recorded in the survey belong to this sub-type. The most accomplished, from Pontefract, Yorks (cat. no. 1012), has a clearly recognisable 'bear-like' animal head, the other two from Harpswell, Lincs (cat. no. 1011), and Coppergate, York (cat. no. 1011, Fig. 3.21C), being highly stylised with simplified facial features. The latter is unusual in the use of an elongated pointed snout at the terminal.

c) Single head facing the split-end (Fig. 3.21)

Four representatives of this type have a single animal head placed at the top of the shaft facing away from the terminal. Two closely related examples, one from Meols, Cheshire, and the other attributed to Goswick, Northumberland (cat. nos 1013-4), have animal heads with sub-triangular, pointed ears and longitudinally faceted shafts. The remaining two, from the Brough of Birsay, Orkney, and Brayton, Lincs (cat nos 1015-6, Fig. 3.21D), use the commoner variety of animal head with rounded ears; the former is also notable for a central panel of interlace on the shaft.

d) Abstract heads (Fig. 3.21)

The ten strap-ends belonging to this sub-type have animal masks which have been stylised to the point of leaving only vestigial facial features. These can be sub-divided into two main groups. The first is characterised by the use of a convex split-end and narrow shaft, the junction between the two being occupied by a pair of drilled holes representing ears or eyes, which also appear at their stylised zoomorphic terminals. Two examples, from Carlisle, Cumbria and Whithorn, Dumfries &

Galloway (cat nos 1017-8; Fig. 3.21E), are close enough in design and dimensions to suggest that they are products of the same workshop. In both cases, their curving split-ends are provided with incised borders, and shafts with two zones of transverse ribbing. A slightly different version also comes from Aberlady, East Lothian, Scotland (cat. no. 1019, Fig. 3.21F).

In the second group, the animal heads which appear at the terminal and the top of the shaft are depicted using a combination of punched dots and arcs, as in the case of the Coppergate example (cat. no. 1011, Fig. 3.21C).

3.3.5 Type 5: Interlace

These strap-ends are characterised by shafts decorated by interlacing motifs enclosed within plain borders, plain split-ends pierced by a single rivet, and a zoomorphic terminal related to those used on the multiple animal-head strap-ends presented above. The nine strap-ends belonging to this type vary considerably in the detail of their interlace decoration. Three from Ipswich and the Coppergate and Fishergate sites, York (cat nos 1031, 1033 & 1035, Fig. 3.21G & H), all have tightly enmeshed interlacing strands executed in relief. A related, though more stylised version, of the same interlace design occurs on a strap-end from Weston, Herts (cat. no. 1028). A proximal fragment from a strap-end from Meols, Cheshire (cat. no. 1027), is similarly decorated with an elongated panel of interlace enclosed within plain borders, though the interlace strands are less tightly enmeshed.

On a further example from Coppergate, York (cat. no. 1034, Fig. 3.21I), the elongated panel of plait-work interlace has been substituted by a Borre-style ring-knot motif (see Chapter 6).

3.3.6 Type 6: Animal heads designed to be viewed side on (Fig. 3.22)

Strap-ends included in this group have distinctive animal heads designed to be viewed from the side, as opposed to from above, as is the case with most strap-ends considered thus far. The facial features also differ, the ears being less prominent, the eyes almond-shaped and the mouths open. Animal heads of this type are best paralleled by those on Scandinavian and Anglo-Scandinavian metalwork decorated in the Ringerike and Urnes styles (see Chapter 6). One of the most elaborately executed heads is that on a strap-end from Lower Brook Street, Winchester (cat. no. 1039, Fig. 3.22B). This features a prominent almond-shaped eye, open mouth with an interlacing tongue and upraised nostrils. Another example from Tarrant Crawford, Dorset (cat. no. 1037, Fig. 3.22A), in addition to the terminal, has two further heads on the shaft, with almond-shaped eyes and open mouths. A more stylised rendition of one such head appears at the terminal of a strap-end from Colchester, Essex (cat. no. 1038).

3.3.7 Type 7: Hooked terminals (Fig. 3.22)

The three strap-ends belonging to Type 7, from Royston, Herts, Barham, Suffolk, and Rottingdean, Sussex (cat. nos 1042-4, Fig. 3.22C), are characterised by hooked terminals. All are of the typical Class B form, with expanded split-ends, transverse incisions on their shafts and stylised zoomorphic terminals with snouts which are drawn out to form the hook.

3.4 Class C: Split-end strap-ends with thin, sub-circular sectioned shafts, various terminals and average ratio of width to length above 1:13

The twenty-seven strap-ends belonging to this class are appreciably narrower than any of the other strap-ends recorded in the survey. The shafts are commonly sub-circular or cylindrical in section and swell towards their centres, leaving a narrow 'waist' marking the junction with their expanding split-ends which are usually

pierced by a single rivet. Decoration, if present, usually consists of either transverse mouldings or criss-crossed incised lines on the shaft. The class is divided into two types on the basis of their terminal form: 1) Knopped terminals; and 2) Other terminals. Examples with damaged or missing terminals are ascribed to the general class heading 'C'.

3.4.1 Type 1: Knopped terminals (Fig. 3.23)

The seventeen strap-ends belonging to this type are characterised by the use of prominent spherical knops as terminals. Most examples are closely related in form and decoration, but this is unsurprising considering that most were excavated from the same settlement site of Hamwic. Four are notable for the use of incised criss-cross designs on their shafts; three from Hamwic (cat. nos 1051, 1052 & 1058, Fig. 3.23A) and a further example from the Peabody site, London (cat. no. 1061, Fig. 3.23B). A variant from Hartlepool has a scalloped outline (cat. no. 1050), whereas an example from Maxey, Northants, has a prominent, wedge-shaped split-end pierced by a pair of rivet holes (cat. no. 1065)

3.4.2 Type 2: Other terminals

This type consists of members of the class with pointed or wedge-shaped terminals. Those with wedge-shaped terminals from Hamwic and Ipswich are either plain, or have transverse incisions on their shafts. One of the pointed-terminal examples from Hamwic (cat. no. 1069), has incised criss-cross decoration in the same manner as that used on the knopped-terminal variety.

3.5 Class D: Split-end strap-ends of leaf or kite-shaped form and various terminals (Fig. 3.23)

This small class, consisting of eleven strap-ends, is characterised by an expanded leaf-shaped tongue which, when more angular, has a kite-shaped appearance.

Another diagnostic feature is a prominent waist at the junction between the split-end and the tongue which is marked by one or two transverse mouldings. The class is usually simply decorated, those from Bottesford, Lincs, and Yarnton, Oxon (cat. nos 1075 & 1081), having punched ring-and-dots on their tongues. An example from Hamwic (cat. no. 1072) has an incised outer border. An exception is the proximal fragment from Scopwick, Lincs, which has unusual engraved decoration with remains of gilding on the surface (cat. no. 1077).

The class are associated with a variety of terminal forms which could be used as a basis for sub-dividing the class, but, with so few representatives, they are best considered together. Examples from Flixborough, S. Humb, Stain and Bottesford, Lincs, and Yarnton, Oxon (cat. nos 1073, Fig. 3.23C, 1075, 1078 & 1081), have spherical, knopped terminals, reserved from their tapering plates by a transverse moulding. Others have simple pointed terminals, as in the case of the example from Hamwic (cat. no. 1072). An example from Stallingborough, S. Humb, meanwhile, has a debased zoomorphic terminal with faceted eyes.

3.6 Class E: Tongue-shaped strap-ends with an average ratio of width to length of 1:2

This is the second largest class of Late Saxon strap-end, with 217 examples comprising 16 per cent of the database. They may be distinguished from those classes considered so far by their broader tongue-shaped form, as indicated by the smaller ratio of width to length, the average being 1:2. The majority are also associated with a different method of attachment consisting of an integrally cast butt-end which is often recessed from the tongue and then secured to the strap by an increased number of rivets, ranging from two to five. In some cases, an additional rectangular sheet of metal was placed over the strap and then riveted to the recess at the back, as in the case of the fine strap-end from Winchester (cat. no. 1122). A few have the traditional split-end associated with other classes of strap-end considered in the survey (e.g. cat. no. 1256, Fig. 3.29G).

Opposite the attachment-end, the bottom of the tongue usually terminates in a broad curve, though in a few examples this is elaborated by a centrally placed projecting knop (e.g. cat. no. 1188, Fig. 3.26C). The majority are associated with cast decoration executed in heavy relief or openwork designs. A stylistic consideration of these various designs forms the basis for an internal classification of the class into six main types: 1) Winchester-style; 2) Anthropomorphic; 3) Ribbed; 4) Borre-style; 5) Other motifs influenced by Scandinavian artistic fashions; and 6) Carolingian

3.5.1 Type 1: Winchester-style strap-ends (Figs 3.24-3.26)

This term refers to strap-ends decorated in motifs associated with the Winchester style (for a general discussion of the style see Kendrick 1949, 1-41; Wilson 1984, 154-60; Hinton 1996b) of which there are ninety-six recorded in the survey. The style, which has its roots in south and south-east England, appears on a range of media including metalwork, sculpture and illuminated manuscripts dated to the 10th and 11th centuries (see Chapter 6). The most important motifs associated with the style, as manifest on metalwork, are the inhabited plant-stem and pure foliage. The former is characterised by the depiction of pairs of confronted, naturalistic birds and/or animals which inhabit a central plant stem. The central stem often terminates in a formalised lion-head mask, from which may issue additional foliate tendrils (e.g. cat. no. 1142, Fig. 3.25B). The latter are composed of symmetrical patterns of acanthus foliage and tendrils lacking any recognisable zoomorphic element, except for the occasional use of lion-mask placed at the top of the central stem.

The designs are subject to varying degrees of stylisation, in the most severe cases the individual motifs are reduced to a symmetrical arrangement of openwork holes. On more elaborate, openwork examples, ornamental detail may be added to individual motifs on both the front and back of the tongue, in effect making them double-sided (e.g. cat. no. 1143, Fig. 3.25C). Distinguishing between single and double-sided Winchester style strap-ends could form the basis for an internal classification of the

type, but in many cases, identification relies upon photographs and drawings which record one side only. Instead, the type is divided into three sub-types according to the stylistic content of their decoration: a) Inhabited foliate designs; b) Pure foliate designs; and c) Stylised designs.

Sub-type a: Inhabited foliate designs (Fig. 3.24 & 3.25)

The most elaborate examples of the type are decorated with inhabited foliate designs; indeed, an example from the Old Minster, Winchester (cat. no. 1122, Fig. 3.24A) has been described by Wilson as the best strap-end ever discovered (Wilson 1969, 327). Pairs of birds are depicted on the majority, but occasionally, pairs of animals are used either singly or in combination with birds, as on the aforementioned Winchester example. Most of the birds and animals are of naturalistic forms in various poses, but occasionally more sinuous beasts are represented (e.g. cat. no. 1136, Fig. 3.24F). The sub-type is divided into two groups based upon the orientation of the decoration: i) Decoration orientated with tongue lowermost; and ii) Decoration orientated with butt-end lowermost. On the first, decoration is in correct orientation with the tongue lowermost and in the second, with the butt-end lowermost. The existence of these two groups strongly suggests that these strap-ends were worn in a horizontal plane.

i) Decoration orientated with tongue lowermost (Fig. 3.24)

The nineteen strap-ends belonging to this group display considerable diversity in detail of form and decoration. Most common are those displaying pairs of confronted birds, either with their bodies facing the central stem and their heads thrust upwards, as in the case of those on strap-ends from Winchester and Wilbury Hill, Herts (cat nos. 1122 & 1123, Fig. 3.24A & B), or else with their bodies facing away from the central stem with heads thrust over their shoulders to face one another, as on strap-ends from Brocklesby, Lincs, and London (cat nos 1126, Fig. 3.24D & 1132). Animals are used less frequently and take on various forms ranging from profiled quadrupeds, as seen on the aforementioned Winchester strap-end, through to

the more sinuous animals, which characterise those on strap-ends from Highcross Street, Leicester (cat. no. 1125, Fig. 3.24C), Oxborough, Norfolk (cat. no. 1136, Fig. 3.24F) and Harnham, Wilts (cat. no. 1139, Fig. 3.24G).

The style of the foliage, which the birds and animals inhabit, also varies considerably. This ranges from the use of attenuated tendrils and shoots, as on strap-ends from London (cat. no. 1132), through to more conservative formalised designs involving fleshier acanthus, as on the strap-end from Harnham, Wilts (cat. no. 1139). In its most devolved state, the foliage is reduced to a symmetrical pattern, illustrated by a strap-end from Congham, Norfolk (cat. no. 1133, Fig. 3.24E). On more representational examples, care is usually taken to depict the central stem, often as a series of lobe-shaped leaves with recessed centres which occasionally bifurcate to form palmettes (e.g. cat. no. 1122).

ii) Decoration orientated with attachment-end lowermost (Fig. 3.25)

The eleven strap-ends belonging to this group display a similar range of diversity as those presented above. Again, designs involving confronted birds predominate, occurring on seven exponents. Noteworthy is the strap-end from Ixworth, Suffolk (cat. no. 1150) which uses a silver inlay to highlight the internal contours of the birds and plant tendrils. Those with animal forms range from quadrupeds, represented on a strap-end discovered near Chichester, W. Sussex (cat. no. 1150, Fig. 3.25D), to the lizard-like creatures on strap-ends from Winchester, Hants (cat. no. 1142, Fig. 3.25B) and Boxley, Kent (cat. no. 1145). The animals on the latter have distinctive oval-shaped heads with dotted eyes, which are closely paralleled by those on the bone strap-end from Leicester (cat. no. 1125).

Sub-type b: Pure foliate designs (Fig. 3.25 & 3.26)

This group encapsulates strap-ends decorated with a wide range of individual designs highlighting the stylistic diversity of motifs associated with the Winchester-style.

The first, represented by six strap-ends recorded in the survey, is characterised by a central stem from which issue two main pairs of bifurcating leaves, each with scrolled terminals. The bottom pair of leaves, on either side of the central stem, curl back to form the rounded terminal of the tongue. The design is executed in both openwork, as in the case of a strap-ends from Meols, Cheshire, (cat no. 1152), and heavy relief, as on strap-ends from Bentley, Suffolk, and an unprovenanced example in the B.M. (cat. nos 1169-1170, Fig. 3.26A). A more elaborate design, incorporating plants with attenuated tendrils, like those used on the London strap-end (cat. no. 1132), occurs on one of the Winchester series (cat. no. 1157, Fig. 3.25E).

Another design, closely matched by two strap-ends in the corpus from Pointon, Lincs, and Fring, Norfolk (cat. nos 1163 & 1167), incorporates a central stem from which issue two pairs of downward-pointing tendrils with scrolled terminals. Both strap-ends also share an unusual border with raised knops. Other designs are more stylised, such as the distinctive scrolled foliage on a strap-end from Costessey, Norfolk (cat. no. 1165, Fig. 3.25G), which reappears in an incised form- most unusually for the class - on a strap-end from the site of Goltho, Lincs (cat. no. 1160, Fig. 3.25F). Similarly devolved is the angular vine-scroll on a strap-end from Coppergate, York (cat. no. 1173). Meanwhile, the pairs of lanceolate leaves which spring from a central stem on the bone strap-end from the same city, may perhaps hark back to those fashionable on Trewhiddle-style metalwork (cat. no. 1172).

Sub-type c: Stylised designs (Fig. 3.26)

The decoration associated with fifteen openwork strap-ends, though clearly related in technique to that used on the Winchester-style strap-ends presented above, is too stylised to enable an identification of individual motifs. Despite this, amongst many of the strap-ends classified under this heading, standardised motifs can be recognised clearly designed to imitate Winchester-style decoration.

One version associated with the sub-type is characterised by a symmetrical openwork pattern representing a simplification of an inhabited plant-stem motif. This design is faithfully reproduced on five strap-ends, the best preserved examples coming from Ravendale, Lincs (cat. no. 1183, Fig. 3.26B), and the Lloyds Bank site, York (cat. no. 1200), though other morphological details, such as the width of the attachment plate and number of rivet holes, vary on each representative. It is interesting that in each case the strap-end is damaged in the same place, indicating a design fault.

Two strap-ends from Snettisham (cat. no. 1189) and West Lexham, Norfolk (cat. no. 1188, Fig. 3.26C), share the same bold openwork design incorporating a central plant-stem executed as a series of raised oval-shaped knops. The similarity of other morphological features, such as their knopped terminals, suggests that they are likely to be products of the same source of manufacture.

A similar degree of stylistic and morphological homogeneity is displayed by three fragmentary strap-ends from Norfolk (cat. nos 1193-5), which have symmetrical openwork designs elaborated with moulded detail on their fronts and unusual acorn-like terminals. In each case, however, the attachment-ends are missing, so preventing their positive attribution as strap-ends. It is possible, by comparison with other similarly decorated objects, that they served another function, such as the 'hasp' from Middle Harling, Norfolk (Margeson 1995, 66, no. 99, fig. 46).

The other strap-ends belonging to this sub-type display considerable diversity, though they may be compared through their use of symmetrical openwork designs, which are in some cases embellished with details cast in relief.

3.5.2 Type 2: Anthropomorphic (Fig. 3.27)

Twenty-five Class E strap-ends are decorated with anthropomorphic representations. These are divided into two sub-types based upon the technique in which their decoration is executed: a) Relief-decorated; and b) Openwork. The use of

anthropomorphic representations is not restricted to Class E strap-ends, they also characterise Type A3 examples and in some cases it is clear that the makers of both classes were drawing upon the same motif.

Sub-type a: Relief-decorated

Strap-ends belonging to this sub-type are decorated with two designs: i) Figures with upraised arms and sprouting foliage; and ii) Headless figures with arms by side

i) Figure with upraised arms and sprouting foliage (Fig. 3.27)

Four strap-ends are decorated with this distinctive design which is closely related to that on a Type A3 strap-end from Brandon, Suffolk (cat. no. 730, Fig. 3.16C). It is characterised by a standing, naked figure with closed legs and upraised arms (e.g. cat nos 1201 & 1203, Fig. 3.27A & B). Foliage, consisting of four pairs of pointed leaves, sprouts from either side of the body below the arms. Facial features represented on the circular head consist of a pair of punched ring-and-dots for eyes and an incised nose and mouth. The torso is also decorated with punched-ring-and-dots, though unlike the Brandon 'man' there is no phallus. The limbs terminate in hands and feet with clearly defined digits. Other features shared by the group include a row of three punched ring-and-dots, below the split-end, and pointed terminals. These stylistic and morphological affinities suggest that the group emanate from a single source of manufacture.

ii) Headless figure with arms by side (Fig. 3.27)

A similar degree of homogeneity is displayed by four strap-ends decorated with a stylised headless human figure. In each case the plain rectangular attachment end is separated from the tongue by a raised transverse ridge. The decoration consists of a human figure portrayed only up to the neck, which touches the upper edge of the field (e.g. cat. no. 1205, Fig. 3.27C). Two arms terminating in three fingers fall

beside the body, the hands turning outwards to touch the frame. From beneath each arm emerges a strand-like element which bifurcates at the edge of the frame. A thin torso is provided with an internal contour and bifurcates to form a pair of legs which join to form an oval loop, enclosing an incomprehensible anatomical element.

Sub-type b: Openwork (Fig. 3.27)

Openwork strap-ends decorated with anthropomorphic figures can be divided into three groups based upon the individual designs: i) Standing figures with lateral 'wings' or foliage; ii) Central figure flanked by profiled animals, and iii) Figures degenerating into interlace.

i) Standing figures with lateral 'wings' or foliage (Fig. 3.27)

The motif which appears on this group is clearly inspired by the human figures which occur on the relief-decorated strap-ends, E2a, i. The design can be interpreted as a naked standing figure, with upraised arms; lateral foliage is represented by a pair of downward pointing lobes, each with horizontal ribbing or a central depression as illustrated by a strap-end from Ipswich (cat. no. 1216, Fig. 3.27D). Like the aforementioned group, they are also associated with punched ring-and-dots which appear singly on the torso of the human figure and on the attachment plate.

ii) Central figure flanked by profiled animals (Fig. 3.27)

Seven Type E2 strap-ends share this design. It consists of a central human figure with a thickened moulded head and torso. On some examples, such those from Stow Bedon, Norfolk (cat. no. 1223, Fig. 3.27E) and Royston, Herts (cat. no. 1219), facial features are incised or punched onto the rounded head. The figure, which lacks any other clearly defined anatomical features such as arms and legs, stands upon a large, sub-circular lobe placed at the terminal of the strap-end decorated with a cluster of punched ring-and-dots. The sides of the tongue are formed by unusual features, best

interpreted as pairs of profiled creatures with punched eyes. Other shared features include rectangular attachment plates with punched ring-and-dot decoration.

iii) Figures degenerating into interlace (Fig. 3.27)

Two strap-ends recorded in the survey, from Winterbourne, Avon and Monknash, S. Glamorgan, Wales (cat. nos 1224-5; Fig 3.27F & G), are decorated with an openwork design consisting of a human figure, with upraised arms, in a similar pose to the figures on strap-ends belonging to Group E2a, i. The legs of the figure degenerate into interlace which engages with two strands issuing from either side of the torso to form an irregular design at the bottom of the tongue. Both strap-ends are close enough in these stylistic details, as well as dimensions and morphology, to suggest that they are products of a single manufacturing source, a proposition also supported by their findspots (see Chapter 7).

3.5.3 Type 3: Ribbed (Fig. 3.28)

Type 3 is characterised by having a central longitudinal rib which divides the tongue in two. It should be noted that the type is also found beyond the survey area on the Continent on sites such as Domburg, Holland, (See Fig. 6.7A). Occasionally, the central rib is provided with a central longitudinal groove, as in the case of examples from Carlisle, Cumbria and Louth, Lincs (cat. nos 1229 & 1234, Fig. 3.28A & B) or may carry lateral nicks, as on a strap-end from Nacton, Suffolk (cat. no. 1240). On some examples, such as the aforementioned example from Carlisle, the rib extends beyond the curving terminal of the tongue. Additional decoration usually consists of longitudinal columns of punched ring-and-dots which flank either side of the central rib. Of the five examples which do not carry such decoration, three have plain tongues (e.g. cat. no. 1237, Fig. 3.28C), one from Oxborough, Norfolk (cat. no. 1238), has columns of lateral incisions and the fifth from Royston, Herts (cat. no. 1230), has columns of circular mouldings.

3.5.4 Type 4: Scandinavian Borre-style interlace (Fig. 3.29)

The twelve tongue-shaped strap-ends classified under Type 4 are decorated with motifs belonging to the Borre-style, a Viking art-style which had a significant impact on the material culture of Britain during the Viking-age of the latter 9th and 10th centuries (see Wilson 1984, 142-3; Richardson 1992). A more detailed art-historical appraisal of the style, as it occurs on strap-ends and contemporary metalwork, follows in Chapter 6, here discussion is restricted to presenting the dominant motifs only. The type is divided into three sub-types on the basis of the particular motifs used: a) animal masks and ring-knot; b) vertebral ring-chain; and c) other interlace designs. It should be noted here that two strap-ends from Weston, Herts, and St Mary Bishophill Senior, York (cat nos. 1249 & 1257, Fig. 3.29D & G), have zoomorphic terminals associated with their tongue-shaped form. The Weston example has an animal head with bear-like ears and a rounded snout, noted in the section presenting B4 strap-ends as a distinctive Anglo-Scandinavian type. The terminal on the York example has been simplified to a pair of circular eyes.

a) Animal masks and ring-knot (Fig. 3.29)

The four strap-ends with which this distinctive motif is associated display a marked degree of homogeneity in respect to both stylistic and morphological features suggesting they are products of a single source of manufacture. It is interesting that in all four cases, the tongue is broken at a similar point indicating a weakness in the design. It is fortuitous that the Essex find (cat. no. 1224, Fig. 3.29A) comprises both fragments of a complete tongue allowing a reconstruction of the overall design, in all other cases, the bottom section of the tongue is now missing. The fact that the edges adjacent to the breakage on the example from Hillington, Norfolk, are filed down suggests that it continued to function as a strap-end after the initial breakage (cat. no. 1246, Fig. 3.29B).

Features include a narrow attachment-end pierced by two rivet holes and decorated by a row of punched ring-and-dots. The tongue is decorated in relief and provided with a plain border as well as an additional upper border composed of a row of five circular bosses punched centrally with ring-and-dots. The decoration consists of a prominent animal mask featuring a large pair of circular eyes and smaller, oval-shaped ears, below which emerges a symmetrical ring-knot design formed from double-contoured interlacing plaits. The same combination of design elements can be paralleled on a number strap-ends from Scandinavia (see Chapter 6; Fig. 6.6D & E).

b) Vertebral ring-chain (Fig. 3.29)

Four strap-ends belonging to the type are decorated with a motif known as the 'vertebral ring-chain' (see Richardson 1993, 34). Richardson considers this a specifically Insular adaptation of Borre-style interlace motif and it occurs on a variety of other media, most notably stone sculpture (Bailey 1980, fig. 60a). It is characterised by a central rib of concave-sided, truncated triangles with internal contours, enclosed by a series of double-contoured curving plaits. On three of the examples from Weston, Herts, Hatcliffe, Lincs, and Blo Norton, Norfolk (cat nos 1249-51; Fig. 3.29C-E) the motif is crisply executed, while on the fourth from Workington, Cumbria (cat. no. 1248, Fig. 3.29C), it is more bungled.

c) Other Borre-style interlace designs (Fig. 3.29)

Included in this sub-type is the strap-end from Great Walsingham, Norfolk (cat. no. 1256, Fig. 3.29F), decorated with a design consisting of a central column of raised lozenges and triangles enmeshed in ring-knot interlace. This decoration is closely comparable to that of the double strap-end from the site of Borre, Vestfold, Norway (Fig. 6.6B), and other Scandinavian finds, prompting the suggestion that it represents a Viking import (Richardson 1993, 15-16).

Similarly, the intricate ring-knot design on a strap-end from St Mary Bishophill Senior, York (cat. no. 1257, Fig. 3.29G) has several Scandinavian parallels, though in this case the punched ring-and-dot motif which decorates its underside is more indicative of an Anglo-Scandinavian milieu for its original place of manufacture (Richardson 1993, 76-8). The remaining two strap-ends belonging to the sub-type from Butingford, Herts and North Creake Norfolk (cat. nos 1254-5), represent bungled attempts at copying Borre-style interlace.

3.5.5 Type 5: Other motifs influenced by Scandinavian artsitic fashions (Fig. 3.30)

This type includes tongue-shaped strap-ends decorated in a variety of designs which cannot be attributed to any of the stylistic types presented so far and which do not belong to Type 6 presented below. This includes the elaborate silver-gilt example from Winchester decorated with a Jellinge-style animal executed in relief (cat. no. 1258, Fig. 3.30A). The majority, however, consist of asymmetrical openwork designs which are occasionally elaborated with additional details executed in relief, an exception being a strap-end from Goltho, Lincs (cat. no. 1262, Fig. 3.30B) which bears to panels of chunky interlace. Despite the fact that the motifs associated with many of these examples are highly stylised and thus difficult to attribute to specific art-styles, the technique and overall appearance of their decoration displays affinities to metalwork representative of the Scandinavian Urnes style (Wilson & Klindt-Jensen 1966, 147-160; see Chapter 6). These finds share the same asymmetrical openwork designs which are stylised versions of the zoomorphic interlace used on more ambitious Urnes-style metalwork such as the Pitney brooch (Backhouse et al. 1984, cat. no. 110, pl. XXIV). Like the other Anglo-Scandinavian strap-ends presented so far, several have punched ring-and-dot decoration (e.g. cat. no. 1272, Fig. 3.30C).

3.5.6 Type 6: Carolingian (Fig. 3.30)

There are twenty-two strap-ends recorded in the survey which either represent Carolingian imports or else are close copies of continental Carolingian strap-ends. This attribution rests upon the recognition of details of morphology and decoration which find their closest parallels on metalwork of continental Carolingian manufacture. A large proportion of this material, comprising primarily strap-ends and mounts, has been discovered in Viking graves in Scandinavia and other areas of Viking contact (c.f. Wamers 1986). The corpus of metalwork has a number of distinguishing features, including cast decoration in the form of stylised foliage - of a highly formalised and sometimes geometric appearance - which is distinct from the more naturalistic foliage associated with the Winchester style (cf. Fraenkel-Schoorl 1978). This decoration is often associated with gilding and the use of ornamental bosses, usually of silver. It should be noted that Carolingian strap-ends were the original inspiration for the tongue-shaped form characteristic of Anglo-Saxon Class E strap-ends (see Chapter 6).

Members of the type vary considerably in overall dimensions, though several are characterised by their small size of around 30mm in length, significantly less than the average class E strap-end (e.g. cat nos 1285 & 1294, Fig. 3.30E & F). Other features associated with several of these small strap-ends include hollow undersides, flat-ended tongues and symmetrical foliate decoration divided by internal borders. The example from excavations at Bull Wharf, London (cat. no. 1285), has slight traces of gilding on the decorated surface. Two further examples from Freckenham, Suffolk, and Potterne, Wilts (cat. nos 1292 & 1294), combine similarly small proportions and hollow-sided backs with rounded terminals and highly stylised plant-stem designs. The Wiltshire example is also gilded. The Manx pair from Balladoole, Arbory (cat. no. 1280, Fig. 3.30D), are similarly decorated with stylised plant motifs separated by internal borders as found on several Carolingian mounts and strap-ends discovered on the Continent (see Chapter 6, Fig. 6.7).

Stylised foliate designs also characterise Carolingian strap-ends of larger dimensions. Examples such as the lost strap-end from Aspatria, Cumbria (cat. no. 1276), carry plant-stem motifs closely paralleled by Carolingian finds such as that on a strap-end from Muysen, Belgium (Fig. 6.7C). The singleton from Balladoole, and a strap-end from Coppergate, York (cat. nos 1279 & 1295, Fig. 3.30G), are decorated with rosette motifs similar to those which appear on objects of Carolingian craftsmanship such as the trefoil mount from Östra Påboda, Sweden (Fig. 6.7D). An example from Flowton, Suffolk (cat. no. 1291), meanwhile, has similar foliate decoration elaborated at nodal points by five silver bosses.

3.5.7 Type 7: Unclassified Class E strap-ends (Fig. 3.31)

A few strap-ends of tongue-shaped form do not fit into any of the stylistic sub-types presented thus far. A noteworthy example from Hindolveston, Norfolk (cat. no. 1299, Fig. 3.31B), is decorated with an openwork design depicting a bull above a second enigmatic animal. Others, such as the strap-end from Hedon, N. Humb (cat. no. 1297; Fig. 3.31A), are decorated with motifs or designs which either elude recognition or represent stylistic anomalies.

3.7 Class F: Double-sided split-end strap-ends with decorative roundels and zoomorphic terminals (Fig. 3.31)

Thirteen examples of this distinctive class of strap-end have been recorded within the survey area. There are, however, several other examples of this Insular type which have been discovered in Ireland, the majority having been excavated from 10th-century occupation deposits in Dublin (Richardson 1993, 152-4). Although displaying variations in details associated with their form and decoration, this class exhibits a series of diagnostic features which clearly distinguish it from other Late Saxon and Viking-age strap-ends.

Most distinctive is a prominent roundel placed above the zoomorphic terminal. This is often pierced by a central hole surrounded by a series of incised concentric circles and/or other incised details, such as billeting. Unlike most strap-ends recorded in the survey, the majority of this class are decorated on both their front and back surfaces. Decoration usually consists of two panels of incised interlace, a larger one on the shaft above the roundel and a smaller at the rectangular split-end, the former being commonly enclosed within beaded or obliquely billeted borders. The interlacing motifs consist typically of the closed-knot designs which occur widely in Insular art, though on occasion, Scandinavian interlacing motifs are also used. The zoomorphic terminals display a great deal of diversity, some have small recessed triangular ears and incised whiskers, others moulded features including rounded, bear-like ears and circular eyes. The class has been divided into two types: those with 1) Perforated roundels; and 2) Unperforated roundels

3.7.1 Type 1: Perforated roundels (Fig. 3.31)

Nine examples of this class have perforated roundels. The majority, such as those from Ashby-de-la-Launde, Lincs (cat. no. 1303, Fig. 3.31C) and Easingwold, N. Yorks (cat. no. 1308, Fig. 3.31E) carry panels of 2-strand interlace on both of their sufaces. Examples from the Udal, North Uist, and Colonsay, however, are marked by the use of Borre-style ring-knot interlace on one of their sides (cat. nos 1301 & 1306, Fig. 3.31D). This style of interlace appears on other members of the class, as well as related buckles discovered outside the survey area in Ireland (Richardson 1993, 152-7). Another distinctive stylistic feature paralleled on Irish finds is the triangular field flanked by hatching on the split-ends of the strap-ends from Ashby-de-la-Launde, Lincs (cat. no. 1303, Fig. 3.31C), and Cronk Moar, Isle of Man (cat. no. 1302). On the latter, and several of the Irish series, this field is occupied by a single triquetra motif.

3.7.2 Type 2: Unperforated roundels (Fig. 3.31)

The remaining four Class F strap-ends have unperforated roundels decorated with a variety of motifs. The example from Norwich (cat. no. 1310, Fig. 3.31F), has an interlaced knot, that from Pickenham, Norfolk (cat. no. 1311, Fig. 3.31G), curving 'spokes' giving a Catherine-wheel effect, and that from Thorpe Salvin, S. Yorks (cat. no. 1313, Fig. 3.31I), a concave-sided triangle on one side and concave-sided cross on the other. The Polstead, Suffolk, find (cat. no. 1312, Fig. 3.31H) has a recessed roundel with quadrants of hatching designed to receive a decorative inlay, now missing. This last example is also notable in that the decoration on the underside is only sketched onto the surface of the metal. Perhaps the most intriguing of these four is the hybrid example from Norwich (cat. no. 1310) which represents a fusion between a Class A and a Class F strap-end. In addition to the decorated roundel, Class A features include a fan-shaped field at the split-end and the substitution of panels of interlace by individual Trewhiddle-style motifs, one zoomorphic and the other foliate.

3.8 Class G: Split-end strap-ends with openwork shafts in the form of Urnes-style zoomorphic interlace (Fig. 3.32)

Nine strap-ends are characterised by wedge-shaped split-ends secured by a single rivet and cast openwork tongues, which, depending upon the quality of the decoration, may carry additional detail executed in relief on their front surface. The asymmetrical designs portray, in varying degrees of stylisation, sinuous beasts with debased heads and bodies which develop into an asymmetrical interlace design. The majority are also decorated with a debased animal mask at the junction between the plain split-end and openwork tongue (e.g. cat. nos 1314 & 1323, Fig. 3.32A 7 C). Two examples are distinguished by additional surface decoration, the tongue on a strap-end from from Great Munden, Herts (cat. no. 1315), having an enamel inlay and that from Grimsby, Lincs (cat. no. 1317), a gilded surface.

The zoomorphic interlace which characterises the class is of a form already discussed in relation to a series of Class E strap-ends which stylistically belong to the corpus of Anglo-Scandinavian Urnes-style metalwork. The closest parallels for the interlacing forms used on Class G strap-ends (e.g. cat. no. 1323, Fig. 3.32C) are provided by the openwork mounts with zoomorphic terminals (c.f. Wilson 1964a, cat no. 141; Owen & Trett 1980) and a group of stirrup-strap mounts (Williams 1997, Class A, Type 10).

3.9 Class H: Unclassified Anglo-Scandinavian strap-ends (Fig. 3.32)

This class is reserved for five strap-ends of idiosyncratic form, the decoration of which displays the influence of Scandinavian art styles. One of the clearest examples is the curious diamond-shaped strap-end from the site of Jarlshof, Shetland (cat. no. 1326, Fig. 3.32E). The gilded decoration, discussed in detail by Signe Horn Fuglesang (1980, cat. no. 55), depicts a distinctive Ringerike-style foliate motif with curling tendrils. More stylised versions of Ringerike-style foliage occur on the lobe-shaped tongues of strap-ends from South Ferriby, S. Humb, and Goltho, Lincs, (cat. nos 1324-5; Fig. 3.32D), the highly stylised foliate tendrils having close parallels on some contemporary stirrup-strap mounts (Williams 1997, fig. 5).

An interesting openwork strap-end from Ogbourne St George, Wilts (cat. no. 1327, Fig 3.32F), has a distinctive profiled gripping beast executed in the round. The forefoot of the creature grips the base of its tail with a three-clawed paw, while the hind foot, which lacks discernible claws, grips its neck. The end of the creature's tail is held lightly in a slightly opened mouth. A good parallel for the well-modelled semi-naturalistic creature comes in the form of a carved wooden toggle from the Fishamble Street excavations, Dublin (Lang 1988, fig. 36, pl. XVII). The Dublin find is dated to the 11th century on the basis of its general archaeological context, together with certain stylistic aspects such as the 'droplet' eye which is a characteristic of the Ringerike and Urnes styles.

Elements of the Ringerike style also occur on a relief-decorated example from Upavon, Wilts, now in Devizes Museum (cat. no. 1328, Fig. 3.32G) This has densely intertwining and spiralling tendrils reminiscent of those decorating one of the initials in the Winchcombe Psalter (University Library MS. Ff. 1. 23) (Fuglesang 1986, 228, pl. 27). Within the corpus of contemporary metalwork, similar vegetal scrolls decorate the lentoid fields of the Sutton, Isle of Ely, disc brooch (Backhouse et al., 1984, cat. no. 105).

3.10 Class I: Composite strap-ends formed from a cast front-plate with a stylised zoomorphic terminal and sheet-metal back-plate (Fig. 3.32)

Seven strap-ends recorded in the survey belong to this homogeneous class (e.g. cat. nos 1331 & 1335, Fig. 3.32H & I). The main characteristic which distinguishes the class from other Late Saxon strap-ends is a composite design incorporating a cast front-plate of which the sides are bent round at ninety degrees to form a housing for the strap. The strap is secured in place by a thin sheet-metal back-plate, riveted to the front by two centrally-placed rivets, one near the upper end and the other towards the terminal. The moulded terminals are highly stylised featuring faceted eyes, ears, nostrils and jaws designed to be viewed in profile. The similarity of these terminals to the animal heads used on Class B6 strap-ends suggests that they should also be considered as representative of the influence of the Ringerike and Urnes styles during the 11th century.

3.11 Class J: Folded-metal strap-ends (Fig. 3.33)

The twenty-seven strap-ends attributed to this class vary greatly in dimensions, overall form and quality. It is possible that simple folded-metal strap-ends may have had a long period of usage extending well beyond the chronological parameters covered by this study. Those included here are derived from stratified, archaeological deposits indicating their currency during the Late Saxon period. The

class most naturally falls into two morphological types: those with 1) Wedge-shaped plates with circular attachment ends; and 2) Rectangular plates.

3.11.1 Type 1: Wedge-shaped plate with circular attachment-ends (Fig. 3.33)

Nine folded-metal strap-ends are characterised by having a wedge-shaped folded section and circular attachment-end pierced by a central rivet. On some examples, such as those from Wing, Bucks (cat. no. 1336), Canterbury, (cat. no. 1337, Fig. 3.33A), and Harling, Norfolk (cat. no. 1341, Fig. 3.33B), the attachment-end and folded plate are separated by a narrow elongated waist. Decoration, if present, is usually simple. The most elaborate is the Canterbury example which has a pattern of conjoined arcs on the front of its folded plate, which may have originally been inlaid with enamel. Examples from Harling and Congham, Norfolk (cat. no. 1340), have transverse mouldings on their waists, the latter in association with punched ring-and-dot.

3.11.2 Type 2: Rectangular-shaped plates (Fig. 3.33D)

Eighteen strap-ends are simply formed by bending a rectangular sheet of copper-alloy in half and securing the open edges to the strap with one or two rivets. Their dimensions vary considerably, as is illustrated by the series from Flixborough, S. Humb (cat. nos 1350-8, Fig. 3.33D). The majority are undecorated, and when present, the decoration is usually simple. Some have nicked or notched edges, such as examples from Thwing, N. Humb (cat. no. 1349), and Flixborough (cat. no. 1358, Fig. 3.33C). Some of the Flixborough series also have centrally-placed triangular projections at their attachment-edges, recalling the sub-triangular bulbs of the palmettes depicted on Class A strap-ends.

3.12 Class K: Split-end strap-ends in the form of an animal head seen from above (Fig. 3.33)

Three strap-ends recorded in the survey have their tongues fashioned into an animal head clearly related to those used at the terminals of Class A strap-ends. Despite this common feature, the three representatives vary greatly in dimensions and decorative detail, despite the fact that both the strap-ends from York and Shenley Church End, Bucks, are both executed in openwork (cat. nos 1363 & 1365, Fig. 3.33E & F). The former has elongated comma-shaped ears, lentoid eyes and a rounded snout, characteristic of the animal heads used on Class A strap-ends discovered in Northumbria. The same type of head also characterises the smaller engraved specimen from Harling, Norfolk (cat. no. 1364). The Bucks example is related to the more popular variety of head, with oval ears pierced by lunate incisions and circular eyes, in this case inlaid with glass settings. Unfortunately, the openwork frame which extends above the ears on this example is damaged, preventing a reconstruction of its overall form.

3.13 Class L: Unclassified (Fig. 3.34)

Included here are fourteen strap-ends of widely varying form which cannot be attributed to any of the morphological classes in the above classification. These are therefore described individually in the catalogue (Appendix 1).

CHAPTER 4: FIND CONTEXTS

This chapter presents a discussion of the various find-contexts of Late Anglo-Saxon and Viking-age strap-ends, assessing their associated biases and the implications of these for subsequent interpretation.

The find-contexts associated with the discovery and identification of strap-ends may be categorised into four main groups: i) Old finds; ii) Hoard finds; iii) Metal-detector finds; and iv) Archaeological finds (see Appendix 1 under the column heading 'Find Type').

4.1 Old finds

Strap-ends associated with this category largely relate to chance finds made before the general advent of metal-detecting as a hobby in the 1970s (Dobinson & Denison 1995, 6). A significant number of strap-ends were discovered during urban developments from the latter half of the 19th century onwards. Most notable amongst this group were the examples discovered at unspecified sites within York, which were later published in Waterman's article on Late Saxon, Viking and Early medieval finds from the city (Waterman 1959). Other strap-ends derived from this source come from Colchester (cat. no. 1038), Highcross, Street, Leicester (cat. no. 1124), Cambridge (cat. no. 812) and London (cat. no. 612). Chance finds such as these were also made in rural locations, often appearing on the routes of old roads and paths, as for example the strap-end from Bledlow, Bucks, discovered on the surface of a track leading to the Upper Icknield Way (cat. no. 986). Another source relates to examples discovered through coastal erosion on beach sites. The most productive of these sites in terms of the number of strap-ends discovered is Meols in Cheshire (Bu'lock 1960; Griffiths 1991), though others have been discovered further north on the western coast of Scotland at Stevenston Sands, Strathclyde, and Glenluce Sands in Dumfries & Galloway (Callander 1932-3).

The majority of strap-ends represented by this heading were once held in private ownership or antiquarian collections and later donated or bequeathed to museums. These finds are often poorly provenanced because such collections included objects from disparate locations or were redistributed to form smaller donations to several regional museums. In other cases, finds were registered at a time when museums were less rigorous in recording an accurate findspot for newly acquired artefacts. A noteworthy example is the strap-end in the British Museum purchased in 1903, along with other antiquities formerly in the Cecil Brent Collection (cat. no. 1138). This strap-end was attributed a London provenance by Kendrick (1938b, 380; 1949, 41) on the grounds that several of the other objects within the Collection were discovered in the City. Wilson later pointed out, however, that Brent's collection was not exclusively comprised of objects from London, but also included finds from Kent and further afield (1964a, 207).

4.2 Hoard finds

A number of strap-ends are contained within Late Saxon and Viking-age hoards (see Chapter 6). These include hoards with mixed assemblages of coinage and metalwork, such as Sevington, Wilts, Talnotrie, Dumfries & Galloway, Beeston Tor, Staffs, Cuerdale, Lancs, and Trewhiddle, Cornwall (Table 6.1), and the non-numismatic caches at Rogart, Highland, Scotland, and Lilla Howe, N. Yorks.

The importance of numismatic hoards for dating purposes has long been recognised, and was highlighted as one of the primary dating methods in Wilson's discussion of devising a chronology of Late Saxon ornamental metalwork (Wilson in Wilson & Blunt 1961, 106-8). Some hoards may also provide clues as to the original use of the artefacts. In this respect, it is not insignificant that five pairs of strap-ends are contained within hoards: two pairs each in Trewhiddle and Lilla Howe and another at Rogart in Scotland (see Chapter 8).

Despite the above, the implications of this source of evidence must be critically assessed. Apart from the associated problems of dating artefacts contained within hoards, which will be discussed at length in Chapter 6, there are also the difficulties in establishing the place of origin of hoard finds. This is especially the case in relation to Viking hoards which are characterised by their mixed booty, often containing an assortment of Anglo-Saxon, Scandinavian and Insular silver (for example, that from Cuerdale, Lancs (Graham-Campbell 1992; see also Brooks & Graham-Campbell 1986). This point is illustrated by the debate over the origins and derivation of 'Hiberno-Viking' arm-rings, for example (ibid., 96-8). Even within specifically Anglo-Saxon hoards, the objects they contained could be derived from disparate regions. The Trewhiddle hoard is a case in point. Apart from containing Anglo-Saxon artefacts whose characteristic decoration formed the basis for defining a diagnostically 'English' ornamental style (Brønsted 1924, passim), it also contains penannular brooch of a specifically Insular type (Wilson & Blunt 1961, 84, pl. XXVIIIb).

Coins are a good indicator of the diversity of the material contained within hoards. A study of the numismatic evidence from the Trewhiddle hoard, for example, indicates that the coins comprise a number of separate parcels accumulated over a period of time (Brooks & Graham-Campbell 1986, 109). Metcalf has recently highlighted that the often atypical mint-structure of hoard coins is indicative of concealment a long distance from the place in which they were originally assembled (Metcalf 1998a, xiv). Any attempts at establishing the place of origin of hoard finds through associated numismatic evidence is further compounded by the fact that the regional diversity of the issues present within them are seldom influenced by the nearest mint to the place of deposition (ibid., 283-4).

One final factor worth considering when assessing the contribution of hoards is the fact that the material generally represents only precious metal objects of the highest status. On its own merit, hoard evidence is thus unrepresentative of the range of materials and quality associated with contemporary artefact types.

4.3 Metal-detector finds

This is by far the most productive of the four sources of discovery, contributing 72 percent of the total number of strap-ends recorded in the survey (see Appendix 1). The general benefits of metal-detecting for field archaeology, excavation, finds and numismatic research has only recently been acknowledged (Gregory & Rogerson 1984; Dobinson & Denison 1995, Richardson 1993, 10-12; Williams 1997, 1; Metcalf 1998a, 17) while an evaluation of its contribution to archaeological research still remains in its infancy (Dobinson & Denison 1995, 3; Gurney 1997).

Finds from this source not only relate to the results of prospecting by individual hobbyists, but also to controlled archaeological excavations and area-surveys which are making increasing use of metal-detectors (Dobinson & Denison 1995, chapters 4 & 5; Newman 1995, 87). Work such as the south-east Suffolk Area Project (Newman 1989) illustrates the potential of this technique not only for the identification of new Middle-Late Anglo-Saxon sites, but, in conjunction with field-walking, for obtaining information on site morphology, development and function (Newman 1995, 91-2). Meanwhile, the use of detectors for 'stratification scanning' on archaeological excavations can lead to a marked increase in the discovery of metallic finds (Dobinson & Denison 1995, 37).

Because of the above, a distinction was made between metal-detected finds on controlled excavations which are treated as archaeological finds (ARCH), and those detected on sites on which excavation has only been limited - usually as a response to discovery by surface prospecting - in which case they are treated as metal-detected finds (MD). Examples of the former include Flixborough, S. Humb and Middle Harling, Norfolk (Gregory & Rogerson 1984, 182-4; Rogerson 1995, 8-9), and of the latter are the so-called 'prolific' or 'productive' sites at Cottam, N. Humb (Richards 1999), Barham, Suffolk (Newman 1995, 92), and Bawsey, Norfolk (see Chapter Eight).

A number of factors might account for the original loss of a strap-end, discovered in today's arable fields. It may have been removed some distance from a contemporary settlement site with rubbish used to manure fields and farmland. The find may be a loss associated with an undiscovered and unrecorded settlement or market site, or on the route of an old road or track. Such stray losses offer an important form of complementary evidence to archaeological finds as their distribution is likely to be more random (Metcalf 1998a, xiii). Firstly, being common objects of everyday usage the distribution of the majority is not dependant upon specialised deposition such as hoarding or burial. Secondly, their discovery is not dependant upon the distribution and activity of archaeologists and archaeological work. Furthermore, being stray finds, they are more representative - than say hoards - of the range in materials, quality and status associated with these artefacts. Regarding this final advantage, one should bear in mind that examples of the lowest status, made of more perishable materials such as iron, are less likely to survive in the harsh environment of ploughsoil (Dobinson & Denison 1995, 51-2). While conversely, de-luxe precious metal strap-ends (because of their value) were more likely to be treasured - hence their existence in hoards - or melted down.

Metcalf has highlighted the importance of metal-detected 'stray' coins for interpreting the monetary economy in Late Saxon England (1998a). If similar potential is to be gained from other contemporary artefacts, a number of caveats must be considered when interpreting this material, together with an explicit understanding of the processes which lead to the discovery, identification and final recording of metal-detected material.

Several factors influence the distribution of metal-detected finds; these come under four main headings: a) Patterns of land-use, b) Distribution of detecting activity, c) Levels of reporting and d) Levels of integration between archaeologists.

4.3.1 Patterns of land-use

At a national level, there is a generally uneven distribution of metallic artefacts of all periods which broadly correlates to Fox's highland and lowland zones (Fox 1932). In the words of the authors of the joint English Heritage (EH) and Council for British Archaeology (CBA) survey on metal-detecting and archaeology (Dobinson & Denison 1995, 50):

> To generalise, the bulk of non-ferrous material dating from the prehistoric period to the end of the Anglo-Saxon era is found to the south-east of a line drawn from the southern coast of Dorset via the Bristol Channel to the Humber estuary.

Of course, this relates to geographic and topographic factors which have always influenced human settlement and activity and thus have a bearing on the 'true' distribution of archaeological finds. Regions such as Devon, Cornwall, much of the West Midlands and the swathe of country west of the Pennines, from Merseyside to Cumbria, are traditionally poor in terms of Anglo-Saxon non-ferrous finds. This rule is reflected in the general distribution of Mid-Late Saxon artefacts, including coinage (Metcalf 1998a, 34), which become scarcer as one travels westwards from the east coast. In the case of strap-ends and other contemporary artefacts, such as stirrup-mounts, notably there are some localised exceptions to this pattern, in particular, regions of the south-west such as Dorset and Wilts (Williams 1997, fig. 10; see Chapter 7). Apart from this underlying factor of the actual distribution of metal in the ground, there are various factors affecting the discovery and identification of metal-detected finds at more localised levels.

4.3.2 Distribution of detecting activity

Various factors come into play at the level of the individual detectorist. Differential recovery of metallic finds is affected by the search technique adopted, the type of machine used, and the experience and rigour/enthusiasm of the individual. Present day patterns of land-use and soil type may also influence detection. Ploughing on light soils provides the optimum condition for detecting, while uncultivated land and/or heavy soils severely limit the chances of discovery. Access to sites is a further influencing factor, though limited, since reported finds are usually associated with legitimate detecting, where permission to search on a landowner's property has been granted.

Finally, one must also consider the distribution of detectorists and searching activity. This will be higher in areas deemed to be particularly productive, as detectorists will concentrate their efforts where they expect to succeed. This pattern will, of course, be reinforced by other factors affecting the quantity of metal in the ground, including the true archaeological distribution, and some of the influences discussed above, such as the suitability of sites for detecting. Productive areas tend to attract more metal-detecting clubs as well as individual searchers, and at a localised level, some sites may be the focus of searching activity over considerable periods of time. This fact has been especially instrumental in the discovery of Mid-Late Saxon 'prolific' sites which consistently produce new finds over several years, each autumn after ploughing. In counties where there is more detailed information relating to the activity of detecting, the results of particularly active local clubs and individuals may be traced (as for example in Norfolk, see below).

4.3.3 Levels of reporting

A recent EH/CBA directed survey on metal-detecting observed that only a minuscule proportion of the hundreds of thousands of detected finds made each year ever found their way into archaeological records (Dobinson & Denison 1995, 8). Because of

this, it is impossible to estimate what percentage the c.1,400 strap-ends recorded in this survey are of the original total. In the case of detected material, an individual searcher might choose not to report his or her find if deemed of poor quality or a particularly common representative, remembering that one of the main incentives for reporting a find is for identification.

The levels of co-operation and reporting vary greatly from county to county and are directly the result of curatorial and archaeological directives (if any) aimed at maximising the potential of this source. In those counties, such as Norfolk and Lincs, with an established tradition of co-operation with detectorists, the levels of reporting are high, up to 24,000 detected finds being reported each year to Norwich Castle Museum, for example (ibid., 20). Conversely, where there is little or no effort, or indeed hostility between the respective groups, the levels of reporting are low. In some cases, high-incidence rates may be the result of the enthusiasm or research interests of a particular local archaeologist or museum curator.

On discovering an artefact, a detectorist might select one of three main archaeological bodies to register his or her find: a museum, a local archaeological unit and/or direct to a county Sites and Monuments Record (SMR) (Dobinson & Denison 1995, Chapter 3). The EH/CBA survey and this research indicate that museums are the most likely destination for enquiries, though there is great variability across the country (ibid., 11-21, tables IX, X and XI). Despite the prominent role attributed to county SMRs in the organisation and dissemination of archaeological information, they are least likely to benefit from metal-detecting discoveries (ibid., 21-26, tables XII and XIII). Of the total number of strap-ends recorded in this survey, only a small percentage were traced through SMR records. In fact, this source proved so unpredictable during data-collection that it was not considered worthwhile contacting all the country's SMRs (see graph). Both Norfolk and Suffolk proved exceptions to this rule, but this is because their SMRs exist within an environment of integrated archaeological and museum services (see below).

4.3.4 Communication between archaeologists

The story does not end with reporting a metal-detected strap-end to an archaeological body, for once identified and recorded the information must be archived and made accessible for research. The quality of the information recorded and the speed and incidence of registering information varies enormously from one county to the next.

Once again, it was counties such as Norfolk, with an integrated system, that faired best in the current survey. In other counties, such finds do not make their way onto SMR records - often artefacts long accessioned in local museum collections remain unrecorded. Not a single example of the 105 identified strap-ends from N. Yorks is recorded on the county SMR, for example, and this includes the old finds housed in the Yorkshire Museum!

The range in quality and detail associated with the recording of metal-detected finds was found to be inconsistent from one county to the next, a problem that should be rectified with the introduction of pilot schemes for the voluntary recording of portable antiquities (Anon 1997, Appendix 2). In some instances, only a findspot together with a very brief written description, is given for each strap-end, as with those recorded on the Northants SMR, published in the 'Archaeological notes' section of the local archaeological journal, Northamptonshire Archaeology. In the case of Norfolk and Suffolk, as well as the brief entries in the 'Archaeological finds' section of their respective county journals, additional information is recorded in the form of Polaroid photographs, drawings and more detailed written descriptions. In Norfolk, everything is photographed, and then selected examples are drawn if deemed of particular importance. These are then archived (in two copies) as SMR records at both Norwich Castle Museum and the archaeological unit at Gressenhall. Again, these East Anglian counties are not representative of the process of recording across the country as a whole, which is generally of a poor and inconsistent standard.

A particular problem associated with metal-detected finds is the lack of accurate information relating to their provenance. This can weaken the strength of any interpretations based on this evidence, as the authors of the EH/CBA report note: "Most reported metal-detected finds are, at best, contributing to our understanding of material distribution at a regional level, but to a far lesser extent at a micro level" (ibid., 27). Despite this, most of the interpretative analysis employed in the current study require no more than a four-figure, national grid reference for recording parish findspots. This level of accuracy was found to be attainable with the bulk of metal-detected strap-ends.

Cambridgeshire is a good example of the distorting effects such factors may have on the regional distribution of finds. The county lies within Fox's lowland zone and is bordered to its east by two counties which both consistently record high numbers of metal-detected finds, Norfolk and Suffolk. This is mirrored in the relatively high number of detected strap-ends recorded, 219 for Norfolk and 77 for Suffolk which contribute 91 and 63 per cent respectively of the total number of recorded strap-ends for each county. The tally from Cambs stands at a mere 19, less than half of these being detector finds. Considering its location, this is a suspiciously low figure that is best explained by the regularly low number of referrals made to the University Museum prior to 1993 (ibid., table X), and the number of detector findspots recorded each year on the county SMR, averaging out at only 7.2 per cent of the total of new find's registrations made between 1988 and 1993 (ibid., table XII). Similarly low strap-end totals from other counties where a greater volume of material could be expected may also be a result of these factors. Contenders include the counties of Essex, Oxfordshire, and Surrey, and again this prediction is confirmed by a glance at the data from the EH/CBA survey.

Counties for which there is more detailed information relating to metal-detected finds allow a more detailed appraisal of the hobby's contribution to archaeological research. Because the 'Norfolk system' records 'events' - defined as recovery episodes from a specific locale rather than records pertaining to individual artefacts -

it is possible (in this case) to evaluate the distribution of metal-detected finds on an intra-county level (Gurney 1997). The recording of these 'events' can be used to build a comparative picture of the distribution of metal-detecting activity and the distribution of specific artefact classes within the county (ibid., 529-30). Gurney noted, for example, a correlation between the distribution of metal-detecting events and Middle Saxon coins in Norfolk, leading him to conclude that "we must not interpret coin and metalwork distribution maps at face value, and that weighting should be applied based on the level of metal-detecting activity" (ibid., 531-2).

A comparison with Norfolk strap-ends reveals a similar pattern (see Map 1). There are comparable blank spots along the county's northern and eastern coastal strips, for example. Other blank areas relate to the north-east of the county, uncultivated regions of the Fens, the Brecks - much of which is now afforested by conifer plantations -and the heavy claylands of central and southern Norfolk. Possibly some of these regions, especially the Fens, were also largely uninhabited during the Anglo-Saxon period.

Conversely, there are also distinct find concentrations in areas in which activity is focused, especially in parishes close to the county's urban centres of Norwich, Kings Lynn, Thetford and Great Yarmouth. Analysis of the data used to produce the distribution of detector events in Norfolk (Gurney 1997, fig. 1) revealed that 65 percent of the parishes in which strap-ends were discovered registered above the county average of nine 'events' per annum. Similarly, there was a correlation between parishes with more than one site producing strap-ends and those with a high number of recorded events. If there are significant biasing effects associated with metal-detecting activity, these may be reduced to some extent by counting the individual parish findspots rather than the total number of individual strap-ends discovered in each parish. The contribution of particularly productive sites to the county distribution will thus be equalised, and a clearer picture of the total coverage attained.

One must ask whether this correlation is purely the result of the distribution and intensity of metal-detecting or whether in some cases the distribution may also be archaeologically meaningful. Would increased levels of detecting in poorly served regions necessarily lead to an increased number of strap-end finds? This is very much a hypothetical question, given that some of these regions relate to areas which provide adverse conditions for detecting. If one considers the results of archaeological fieldwork, however, it is clear that this pattern does, in some cases, relate to contemporary settlement activity. In Norfolk, the results of fieldwalking are particularly successful in identifying Middle Saxon settlement as this period is associated with the widespread use and dissemination of a diagnostic pottery type - Ipswich ware (Williamson 1993, 89; Blinkhorn 1999). At a localised level, surveys such as that undertaken in the northern Fenland region of the county, are producing results concordant with the metal-detected evidence (Silvester 1993). More detailed countywide analysis of these distributions will be presented in Chapter 7.

At this stage, it is clear that such regional data are of vital importance if artefact distributions are to be interpreted accurately.

4.4 Archaeological finds

Taken alone, this source also imparts a biased picture of the discovery and identification of strap-ends. The discovery of metallic artefacts from archaeological sites is dependant upon the sampling techniques used, and the time devoted to the work. As mentioned above, many more metallic artefacts are recovered on excavations which employ a programme of metal-detecting (Gregory & Rogerson 1984). As the E.H. survey highlighted, however, the use of this recovery method by archaeological units is still far from universal (Dobinson & Denison 1995, 34).

Underlying the sampling techniques instrumental in maximising the yield of finds are the general distribution of archaeologists and archaeological work, mentioned in Chapter 2. In the past, this was strongly influenced by the location of academic

institutions, but increasingly, with professional 'contract' archaeology, it is being guided by the location of commercial development. Because of this, some areas are better represented 'archaeologically' than others. Generally, towns and affluent areas of south-eastern England are particularly well served in comparison to rural areas and the north and west of the country. This biased picture may be redressed to some extent by the activity of metal-detectorists, which, as has already been noted, is concentrated in rural locations.

One advantage of excavated material is that it represents complete retrieval regardless of condition or quality, in the knowledge that there are the resources and expertise for the adequate conservation of the artefacts. In most instances, excavated finds are then available for primary study by the researcher.

Extended interpretation of the relationship between specific site-types and strap-ends is reserved for Chapter 8. At this point, it is apposite to state that strap-ends are discovered from a whole range of sites with various functions and statuses during the Mid-Late Saxon period. These include rural settlements, towns, possible market sites, churches and other ecclesiastical centres and their associated cemeteries. In the use of these terms one is, to a certain degree, dependant upon the interpretation of archaeologists and excavators, bearing in mind that during the Late Saxon period there was unlikely to have been a rigid hierarchy of sites, each with mutually exclusive functions. Indeed, the excavation of high-status rural sites such as Flixborough, S. Humb, which enjoyed continuous occupation throughout the Mid-Late Anglo-Saxon period, highlights the dynamic nature of contemporary settlements (Loveluck 1998) and suggests the status and function of a site may change both spatially and temporally (ibid., 159).

A discussion of the potential of archaeological discoveries for the dating of Late Saxon and Viking-age strap-ends is reserved for Chapter 6. For the purpose of reference, antiquarian and archaeological discoveries made prior to the 1930's are provided with the title 'OLD/ARCH' in Appendix 1.

4.5 Summary

Taken individually, each of the four principle sources for the discovery of strap-ends has its own particular benefits and disadvantages. By collecting as broad a sample of strap-ends as possible - encapsulating data associated with all four sources - this study attempts to eliminate, or at least to lessen, the effects of their associated biases. This is especially important when attempting to assess the archaeological significance of the distribution of these artefacts (Chapter 7).

CHAPTER 5: THE MANUFACTURE OF LATE SAXON STRAP-ENDS

5.1 Introduction

This chapter explores the production systems involved in the manufacture of Late Saxon strap-ends. This enquiry includes a consideration of the range of processes, techniques and materials used during the various stages of their manufacture - from the selection of primary fabrication materials, to their final decoration. The interpretations provided are based upon, and qualified by, comparisons with previous research into a variety of contemporary artefacts, materials and metalworking evidence.

In an attempt to elucidate the various modes of production associated with these artefacts, one is reliant upon the assessment of a range of evidence. One of the most illuminating forms of information comes from material directly involved with strap-end manufacture. This elusive evidence is considered under three main headings: i) Moulds ii) Models and iii) Unfinished strap-ends.

What part did such moulds, models and other metalworking evidence play in the production of cast objects during this period? A definitive answer to this question cannot be given since, to date, no workshop for the production of strap-ends or other Late Saxon dress accessories has been excavated.

Although there is no direct evidence of manufacturing, many urban and high-status monastic and secular sites have combinations of sizeable strap-end assemblages and general evidence for non-ferrous metalworking, from which production may be inferred (see Bayley 1991). Flixborough, S. Humb is a particularly good candidate in this connection. The site has produced considerable evidence for non-ferrous metalworking, including tools and a selection of metalworking debris (Loveluck 1998, 156-7; pers. comm.). In addition, examination of the artefactual record indicates several instances of the re-use of older artefacts, a published example being

a hooked tag reworked from an 8th century silver-gilt object (Leahy in Webster & Backhouse 1991, cat. no. 69p). Another case is a 9th-century folded-sheet strap-end, fashioned from an Insular 8th-century bucket-mount (Youngs in Thomas forthcoming). The latter belongs to a large series of crudely-fashioned, folded-sheet strap-ends from the site, which are best interpreted as products of on-site manufacturing.

Such discoveries should be seen within the wider context of early medieval metalworking in north-west Europe (see Brown 1986). On the Continent, tools and metalworking debris have been recovered from both settlement sites and jewellers' graves (Capelle & Vierck 1971; Decaens 1972). In addition, there is evidence of the existence of permanent workshops - such as those excavated at Helgö in Sweden - specialising in the mass-production of a range of brooches and other dress-accessories (Jansson 1981; Lamm 1980). Smaller workshops have been suggested in light of the discovery of moulds and other metalworking debris from sites within the British Isles, especially from Insular and Irish contexts (Bayley 1991; for more recent evidence see Spearman & Higgitt 1993, Part II; Swan 1995).

Most work relating to the technicalities of early medieval metalworking has focused on artefacts of the early Saxon era, with particular reference to brooch types (Mortimer 1994; Hines 1997, Chapter 4; Arnold 1988, 81-84, 136-139; Leigh 1990; Dickinson 1982). This research suggests that by the sixth century, 'piece mould' technology was the norm for producing smaller cast objects such as dress-accessories, both in this country and on the Continent (Mortimer 1994, 29).

A brief summary of the technique is as follows. The mould was first made by taking a lump of clay of suitable size, roughly flattening it and pressing a pattern of the object to be cast into its upper surface. A second piece of clay was then pressed down on top of the pattern, forming the upper valve of the mould. After separating the valves in order to remove the pattern, the two halves of the piece mould were then re-assembled and luted with extra clay before the casting began. Molten metal

was then poured into the mould valves via in-gates or sprue caps and as it cooled, the metal solidified into the recesses forming the negative impression on the inside of the mould. Usually, the casting process caused irreparable damage to the mould valves, which in any case had to be broken to remove the casting, necessitating the production of new moulds for each object cast. In some cases, for particularly small objects such as pins, there may have been the opportunity to perform multiple castings (Bayley 1991, 118).

Much speculation has centred on the process of producing two-piece clay moulds for the manufacture of early Saxon brooches (see Mortimer 1994). On the one hand, these seek to explain a general uniformity in the decoration and morphology of some brooch types across long distances, and on the other, the fact that rarely are two brooches exactly alike in detail (Hines 1997, Chapter 6; Dickinson 1982; Jansson 1981). A likely explanation for this phenomenon is the use of portable solid models, around which the unfired clay moulds were impressed. On completion, the two halves of the mould were separated and the model removed for re-use in the production of new moulds.

Despite the opportunity for producing identical moulds afforded by this technique, especially if actual finished artefacts were used as solid models, the bulk of evidence for early Saxon brooch types suggests that moulds were made individually (Hines 1997, 207). This could be achieved either by cutting a 'negative' version of an artefact directly into wet clay or around an individually formed 'positive' model. In the case of the latter, a suggestion put forward to explain the lack of identical brooches is the use of individually made wax models which were melted out during casting (ibid., 208).

Despite this, there is also evidence for the use of solid durable models (see below). Possible 'models' have been identified on the basis of the discovery of objects which lack the functional attributes of finished objects and the use of lead or lead-alloy in their production.

Most recently, a two stage mould-making process has been advocated for the production of some 6th-century brooches on the evidence of a detailed examination of three lead-alloy models (Mortimer 1994). It is suggested that to produce the finer details of decoration and the fastening mechanisms associated with finished brooches, it was necessary to produce both primary and secondary moulds, the first from a wax and the second from a lead model (ibid., 30-1).

Technological advances in the Late Saxon period, and the increased use of lead and lead-alloy artefacts (see Bayley 1992a), such as those found in the Cheapside hoard, London (Hornsby et al. 1989, 50, no. 8), allowed the serial production of dress-accessories, a development that was to become increasingly important during the medieval period (Egan & Pritchard 1991, 18-20; Lindsey & Webber 1993, 140). Most important in this advance was the use of solid moulds, usually of bone or antler, that could be re-used time and time again (MacGregor 1985, 195; Newman 1993a). The increasing use of such base metals has been associated with the growth of specialised craft production in urban centres, fostered by the growing demand to provide affordable jewellery for a wider, more economically diverse market (Brown 1992, 136).

5.2 Manufacturing Evidence

Returning to metalworking evidence specifically relating to strap-ends, discussion will now turn to the three main forms highlighted above.

5.2.1 Clay moulds (Fig. 5.1)

Only two fragments, both from the same 'two-piece' mould, have been positively identified as being used in the manufacture of a Late Saxon strap-end (Taylor & Webster 1984), although perhaps this is not too surprising considering the fragility of this form of evidence (Bayley 1991, 124). The fragments were discovered in the fill

of a rectangular timber-lined structure, dated to the Middle Saxon period by preliminary dendrochronological analysis (ibid., 178), during excavations on Crown and Anchor Lane, Carlisle.

Only the larger of the two fragments, representing - on the finished strap-end - a portion of the split-end and upper limits of the main decorative field, allowed more extended analysis of form and decoration (ibid., fig. 4). The fragment was identified as being used in the production of a Class A1 strap-end, though features such as its unusually large size and distinctive palmette point to affinities with a northern variant (see Chapter 3, Group A1a, viii), strengthening the case for a local context for its use (ibid., 179-80).

In the 1984 article, Taylor and Webster argued that the incomplete nature of the main decorative panel precluded a reconstruction of the motifs used; in the words of the authors "it is not even certain whether the elements within it represent interlace, plant or animal decoration, all of which are equally possible" (ibid., 179). Recently, however, the fragment has been redrawn, and a copy of the drawing was made available during a study visit to Carlisle (Fig. 5.1A). The new illustration clearly identifies the original design as being of zoomorphic interlace, depicting a small profiled animal, of which only the head, neck and upper portion of the body survive. The head has a gaping mouth, dotted eye and pointed ear. To the side of the animal, extending into one of the upper corners of the panel, is a strand of interlace pierced midway by an additional looping section. This decoration is entirely consistent with that used on this type of 9th-century strap-end, having especially close stylistic affinities with the regional group alluded to earlier.

In addition to this example, there are other mould fragments which may be more tentatively attributed to strap-end manufacture. One is a corner of an upper valve of a two-piece mould from excavations at Wharram Percy, N. Yorks (Fig. 5.1B). This clearly depicts a rectangular panel with interlace decoration, not unlike that used on some 9th-century strap-ends (see Lang 1992, 66). Further contenders come from

excavations at the Buttermarket site, Ipswich, which has produced a quantity of non-ferrous metalworking evidence from late 9th-/early 10th- century contexts (Fig. 5.1C; see also Wade 1993, 148). The most convincing example consists of a mould fragment impressed with the design of a tongue-shaped Class E strap-end decorated with symmetrical geometric ornament. Unfortunately, such a design is as yet unparalleled on complete strap-ends from Ipswich itself, or indeed any other examples recorded in the survey, although, morphologically, the tongue-shaped form is commensurate with the late 9th/10th-century dating of its archaeological context.

An iron mould, as yet unparalleled in the corpus of contemporary metalworking evidence from north-west Europe, comes from the excavations at 16-22 Coppergate, York (Ottaway 1992, 523). The finished strap-end would have had parallel sides and a very stylised 'tripartite' zoomorphic terminal, featuring small ears, and a rounded nose. A similar design is provided by two iron strap-ends from the same site (ibid., 3790 & 3791), though simple parallel-sided strap-ends with debased features form a common group of contemporary strap-ends (see Class B, Chapter 3). The use of a solid iron mould should be compared with the technological advance described above, allowing repeated castings. The cultural milieu to which the Coppergate mould belongs certainly adds weight to the possibility that such technology was introduced under Scandinavian influence (see MacGregor 1978).

5.2.2 Models (Fig. 5.2A)

Again there exist very few positively identifiable models for the manufacture of strap-ends. The problem is complicated by the fact, as already mentioned, that lead-alloys became increasingly popular in the production of finished objects in the Late Saxon period. It thus becomes difficult to distinguish between what may be considered a model and the finished product (see Mortimer 1994, endnote 21), especially if the artefacts are incomplete. Suffice to say, if there are clear indications of attachment features, such as rivet holes, there is no reason to believe that the item was not worn as a strap-end, no matter how crude the decoration. This difficulty in

identification has resulted in the inclusion of all lead-alloy strap-ends within the catalogue, despite the possibility that some were actually models.

The best candidates for identification as models are two discovered close to the parish church of Fingringhoe in Essex in 1987 (cat. no. 993, Fig. 5.2A). Both are of lead-alloy and of similar dimensions, 27 and 30mm in length respectively. Both also display clearly-executed zoomorphic terminals with rounded ears, dotted eyes and 'muzzled' snouts, although they differ in other respects. One has a plain rectangular-shaped shaft above the terminal, whereas the other is more elaborate, having what appears to be a second animal mask, diametrically opposed to the terminal, as though it were a mirror image.

Stylistically, the models, or 'trial pieces', are difficult to parallel, primarily through a lack of more diagnostic decoration. The use of multiple animal masks along the shaft of the strap-end is, however a feature of some Anglo-Scandinavian strap-ends, some of which have a similar design of opposing animal heads (see Type B4, Chapter 3).

Other possible examples come from Shenley Brook End, Buckinghamshire, and Bawsey, Norfolk (cat. nos 6 & 1096), though these could also be considered as unfinished strap-ends. Both are plain, apart from two punched depressions marking the position of the rivet holes for the finished strap-ends.

5.2.3 Unfinished strap-ends

Central to this category is the series of unfinished Class A strap-ends in the hoard from Sevington, Wilts (cat. nos 135-41, Fig. 5.2B, Appendix 4). These include three silver, and four blanks of copper-alloy, together with a finished copper-alloy example (cat. no. 395). All except the silver blank (cat. no. 135) are provided with split-ends.

In his discussion of the Sevington strap-ends, Wilson describes cat. no. 137 as a "bronze ingot with a split-end", placing it at the beginning of the manufacturing process which ultimately leads to the completed example (ibid., 63). The use of such terminology should be qualified, as the term 'ingot' implies production from a one-piece ingot mould. This manufacturing process is usually associated with the production of crude bar-ingots for smithing (Bayley 1991, 117-18). In this case, surface finish was not important as the ingots were later wrought or hammered to produce rods, wire or sheet from which the final object was made.

Other, unfinished strap-ends or 'blanks' are recorded in the survey, including an example from Cheddar, Somerset (cat. no. 112). This is similar to the Sevington examples in having a thickened terminal section, though the split-end is unformed.

A total of eleven strap-ends recorded in the survey represent later stages in the manufacturing process, requiring the application of decoration on their main panels. This figure does not include strap-ends with empty settings associated with inlaid decoration as these are easily confused with finished strap-ends whose original decorative inlays have since been lost, damaged or worn away.

5.3 Methods of manufacture

This section discusses the most likely methods used in the manufacture of 9th-century split-end strap-ends, particularly Class A. Considering the great range in quality, it is likely that a number of different metalworking techniques were utilised. The choice of method would have been dependant upon the properties of the metal or alloy used, the intended decoration, and other factors relating to the individual metalworker. In the majority of cases, however, the most economical method in terms of time and resources would have been preferred.

The evidence for moulds and models presented above suggests that casting may have been used in some cases. This is to some extent borne out by a detailed examination

of finished strap-ends themselves, the main source of information upon which one has to rely in light of the scarcity of direct evidence for manufacture.

There are instances of strap-end pairings and larger groups whose almost exactly matched dimensions and decoration might suggest production from the same model (see below). Pairs of strap-ends have been discovered in hoards at Trewhiddle, Cornwall (cat. nos 237 & 1366), Lilla Howe, N. Yorks (cat. nos 293 & 417), and Rogart, Highland, Scotland (cat no. 614), though others have come to light through metal-detecting activity, the most elaborate example being the silver pair with gold filigree decoration from Ipsden Heath, Oxon (cat. no. 430). In addition, trios have been discovered in the parishes of West Rudham and Ashill in Norfolk (cat nos 328 & 426). A closer examination of some of these pairings, however, reveals that cast production should not always be assumed. In the case of the Ipsden Heath pair, for example, their surface appearance, combined with differences in their dimensions and other details, is indicative of wrought manufacture by hand rather than casting (ibid., 122; see below).

The comparison of single finds whose decorative and morphological features are almost identical also suggests serial production from moulds impressed from the same or similar models. This has been proposed in relation to Group A1a, vii strap-ends discovered in and around York (Bailey 1993, 90). Indeed, casting seems increasingly likely in the reproduction of stereotyped groups of strap-ends, as suggested in this case.

More detailed analysis of this Yorkshire group, however, also indicated differences in detail (ibid., 90). This may be explained by the fact that certain elements of decoration were usually applied after casting, and that the casting process may itself have caused detailed variations in the finished products. In the case of the Yorkshire group, the former explanation was given for differences in the speckling of the Trewhiddle-style beasts used to decorate their central panels. Dickinson has also explored the possible causes of variation amongst pairs of cast saucer brooches

concluding that "differential flowing of the metal in the moulds could cause some changes in the nature of the elements, and might consequently necessitate more cleaning of the cast than was usual" (Dickinson 1982, 30). Thus alterations in metal flow during the casting process and the differential cleaning associated with this may cause slight variations in the form and dimensions of products associated with the same model. As Bailey points out, one can only confidently attribute individual strap-ends to this form of stereotyped production through detailed comparisons of the artefacts side by side (ibid., 90).

In other cases, the casting process may leave diagnostic traces on the surface of strap-ends identifiable through detailed examination. Very occasionally, casting seams may be observed on the edges of strap-ends. These features relate to the presence of an ill-fitting join between the two halves of the mould, into which molten metal ran during the casting process (Bayley pers. comm.). Unfortunately, diagnostic features such as these are likely to have been removed in most cases by finishing such as filing and polishing.

It should not be assumed, however, that casting was the only technique used, as many have done previously (Hinton 1996a, 43; Webster in Webster & Backhouse 1991, cat. no. 66l, m & n, 191, 192, 193, 194). Perhaps subsequent generations of scholars have been influenced by Baldwin Brown's comment upon the Anglo-Saxon jeweller's predilection for casting above all other methods of fabricating objects (Baldwin Brown 1915, 308).

There are obvious examples of sheet-metal strap-ends, such as the group of folded-sheet examples from the site of Flixborough, S Humb (Thomas forthcoming). There are also Class A examples whose delicate, thin dimensions also suggest sheet technology. A likely contender comes from Flixborough, S. Humb, in this case the rough oblique file marks evident on the surface of the metal are another indication of wrought manufacture (cat. no. 649, Fig. 3.15C). The evidence provided by

unfinished strap-ends from Sevington (see Appendix 4) and elsewhere also indicates the application of strap-end features by other means.

A closer examination of some Class A and B strap-ends, which appear cast on primary observation, reveals that this was not the case. Inspection of the split-ends and outer edges of some strap-ends through a low-magnification microscope exposes a clear joining mark extending well below the apex of the split along the shaft. In some cases, solder can also be discerned, sandwiched between the split. Detailed examination of the pair of silver strap-ends from Ipsden Heath, Oxon (cat. no. 430), revealed "small folds or fault lines" on their edges "giving the impression that they were each formed as an elongated strip which was then folded in half and consolidated by hammering" (MacGregor 1994, 122).

This method of manufacture would certainly have been far less labour and resource intensive than casting and thus represents a likely method of manufacture for many 9th-century strap-ends. It also provides the easiest method of forming the split-end, which would otherwise have required more effort and time-consuming processes such as cleaving followed by hammering.

If one accepts this proposition, the following procedure is likely to represent one of the main methods used in the manufacture of 9th-century strap-ends. A crude ingot would have been formed at the initial stage of alloy smelting, which was then beaten or hammered out into a strip of metal of the required dimensions. The metal was then folded about what would become the terminal and consolidated up to the opening of the split-end. In the case of softer alloys and silver, this could have been achieved by hammering only. For harder alloys, solder or another adhesive may also have been required to maintain the bond. The rivet holes were then punched through the split-end which was probably widened to accommodate the strap by forcing the two plates apart. In the case of the Ipsden Heath pair, a lateral crease caused by this process was identified on the back of one of the strap-ends (MacGregor 1994, 122). The contours of the strap-end were then filed down to the required shape, along with

the general outline of the zoomorphic terminal, which may have been further elaborated with an engraving tool. Any working prior to the final application of decoration was carried out at this stage. This might include the formation of recessed panels, the upper surface of which was 'keyed' or hatched to facilitate the adhesion of decorative inlays.

Alternatively, a slightly different method of manufacture may have been used, as suggested by Susan La Niece from her examination of the unfinished strap-ends from the Sevington hoard (see Appendix 4). In this scenario, a crude ingot of reasonable thickness - such as those discovered at Coppergate, York (Bayley 1992d, 781) - would have first been formed, as in the initial stages of the process outlined above. A cleft would then have been made in one of the ends using a sharp tool such as a chisel. The ingot would then have been subjected to careful hammering to achieve the required shape and dimensions, this was probably achieved using a cross-pein hammer with a chisel-shaped striking face (ibid., 781-2). During this process, the length of the split would have increased considerably as the metal was flattened out and spread by the hammer, as long as care was taken to maintain the cleft by the insertion of some type of wedge.

The formation of the rivet holes and application of other decorative features would then have followed as for the first method. Detailed examination of the undersides of some strap-ends often reveals irregular facets on the surface of the metal. Such features are best interpreted as evidence for hammering during a process similar to that described above (Bayley pers. comm.).

The wrought-technology associated with the manufacture of both copper-alloy and silver strap-ends, described above, was also used for the production of contemporary iron strap-ends. The series of tinned iron strap-ends from Coppergate, York (cat. nos 1374-7) were made either by folding a strip of iron in two or else by welding two separate strips together leaving the split-end open to grip the strap (Ottaway 1994,

691). The same technique was also used in the manufacture of the inlaid iron strap-end from Ramsbury, Wilts (cat. no. 967, Evison 1980, 35).

These interpretations also accord with other evidence for the growing popularity of sheet-metal dress-accessories during the Middle Saxon period (Mortimer 1992, 100). Mortimer suggests that this development may have been influenced by the nature and availability of the alloys used (see below) and by a growing consumer market requiring cheaper copper-alloy counterparts to the de-luxe precious metal exemplars of the day. The importance of brass as an alloy during this period is inextricably linked with this change, as its working properties lend themselves to the manufacture of wrought and sheet objects. It is difficult to establish, however, whether greater access to sources of brass was the catalyst to this change, as consumer demand for inferior sheet metal products would have led to experimentation with new alloys.

Consideration of other contemporary dress-accessories confirms this development. The majority of copper-alloy Mid-Late Saxon hooked tags, for example, are associated with sheet-metal manufacture. Series of unfinished sheet-metal hooked tags, suggesting on-site manufacture, have been discovered at both Flaxengate, Lincoln (Griffiths 1987-8, 46), and Thetford, Norfolk (Goodall 1984, cat. nos 34-39). In some instances, the decoration of hooked tags and strap-ends are so closely related that they may be interpreted as products of the same hand or 'workshop' (Thomas 1996, 85). Considering the stylistic assertions for the close relationship between these two artefacts types, it is also likely that they share similar methods of manufacture.

Detailed analysis of the hoard of brooches from Pentney, Norfolk, also reveals a similar technological process. Casting was used in the initial stages to provide a rough circular model, and most of the decoration was applied later by wrought techniques (Webster pers. comm.).

Despite this evidence for a growing sheet-metal industry in the Middle Saxon period, casting remained popular for the production of certain classes of dress-accessory during the 10th and 11th centuries. This is seen clearly in the corpus of contemporary strap-ends, though a similar study of brooches and pins would doubtless also indicate the continuing importance of this manufacturing technique, as would a study of other contemporary artefacts such as stirrup-strap mounts (Williams 1997). This observation does not deny the continued importance of sheet-metal manufacture into this period for the production of other categories of artefact, however, the aforementioned series of hooked tags being a notable example.

Cast production was a necessary perquisite for much of the heavy relief and open-work decoration fashionable on ornamental metalwork during the 10th and 11th centuries. This taste for depicting the repertoire of 'Winchester style' animal and foliage motifs in the round was taken to the extreme in complex cast objects such as the Canterbury and Pershore censor covers (Backhouse et al. 1984, cat. nos 73 & 74), though similarly accomplished work is also associated with smaller objects such as strap-ends (Wilson 1969).

In some cases, the sub-circular open-work ornament associated with Winchester-style strap-ends appear to have been drilled first and subsequently enlarged with a file. This was noted as a feature of the most elaborate of the strap-ends from Winchester (cat. no. 1122; Wilson 1969, 327) and a related strap-end from the Pavement site, York (cat. no. 1199; MacGregor 1982, 89).

5.4 Materials

A study of the various materials employed in the manufacture of strap-ends reveals that copper alloy was far and away the most common (see Appendix 1) (This analysis does not take into account smaller amounts of metals used for rivets or applied decoration). In accordance with taste and availability, certain metals and materials were more popular in some periods than others. Silver, for example, is

almost exclusively associated with Class A variety, as might be expected in a period for which there is considerable evidence of a high circulation of this metal (Wilson 1964a, 26-7; Hodges 1989, 136). Lead and bone meanwhile, were materials restricted to the production of Class E strap-ends. There is only one gold strap-end (with an attendant buckle) recorded in the survey, the lost Class E6 example from a Viking grave at Aspatria, Cumbria (cat. no. 1275). This observation accords with evidence for the scarcity of gold and/or a decline in its popularity for the manufacture of most dress-accessories, save for finger rings, after the 8th century (Hinton 1978, 135; Webster in Webster & Backhouse 1991, 220).

In the case of copper-alloy strap-ends, there has been no attempt to analyse alloy composition in the present study. This is not to deny that such analysis may have considerable potential in revealing the source of the alloys used, helping to establish whether they were derived from recycled scrap or else fresh stocks. More importantly, in the present context, scientific analysis may indicate a correlation between morphological and decorative sub-groups of strap-end and alloy composition, a result that might be expected in view of the fact that the working qualities of a particular alloy are intimately related to its composition.

Past research into Anglo-Saxon copper alloy composition has been based on both analyses of specific artefact types (Mortimer 1990; Caple 1986; Brownsword & Hines 1993) and metalwork assemblages from contemporary sites (eg Mortimer et al. 1986; Mortimer 1988; Bayley 1992d; Blades 1995).

These studies suggest that the Middle Saxon period marked a general shift from the use of recycled scrap metal, the most common source up to the 7th century, to freshly smelted alloys (Bayley 1992d, 809; Mortimer 1992, 100). This interpretation is based upon two analytical criteria. Alloys representing recycling are generally more mixed, often having a 'quaternary' composition of copper, zinc and tin, with smaller quantities of lead (Mortimer 1991, 106). Such alloys are termed leaded gunmetals (ibid., 106 for nomenclature). Another diagnostic feature of 'recycled-alloys',

especially brasses, are their relatively low zinc contents. This phenomenon is related to the fact that each re-melting would have caused the original zinc content to be reduced by about 10 per cent (Blades 1995, 148).

Conversely, fresh production often results in simple binary alloys, made up of copper with either tin or zinc to produce pure brasses or bronzes. Lead was sometimes added to these relatively pure alloys to affect the metal's malleability and ductility, making it more suitable for casting small objects. Brasses with high zinc contents (28 per cent) - which represents the limit thought possible for the cementation process until the post-medieval period (Craddock 1985) - are also indicative of the smelting of raw materials.

Blades' analysis of 151 objects from the Middle Saxon site of Brandon, Suffolk, confirmed the general change outlined above. He sub-divided the objects into 'fabrication categories' (Blades 1995, 116) under five main headings; small cast, large cast, wrought, sheet and wire. His results indicated that the assemblage was dominated by two alloy types, representing a polarisation between a fairly pure brass and a bronze. The fabrication category of the particular artefact was also shown to influence the two predominant alloys. The brass was associated with both small cast and wrought metalwork. The bronze, however, was often subject to the addition of lead in varying quantities, more for cast, and less for wrought objects (ibid., 148).

Similarly, analysis of 225 non-ferrous artefacts from Hamwic revealed a predominance of purer alloys of bronze and leaded bronze with only 10 per cent of the sample comprising gunmetals (Wilthew 1996).

The importance of brass during the Middle Saxon period has also been indicated by research into the debasement of silver pennies circulating in southern England during the 9th century (Metcalf & Northover 1989). Similarly, Gilmore's detailed research into the alloy composition of Northumbrian 'styca' coinage has also highlighted the importance of brass for this purpose at a similar period (1987). Meanwhile, scientific

analysis of the Coppergate helmet revealed that most of the helmet was composed of a relatively pure brass indicating that the alloy "had neither been subjected to much remelting nor mixed with scrap bronze" (Lang, Craddock & Hook 1992, 1019)

During the Late Saxon period, evidence points to an increasing emphasis on the use of brasses for the production of a variety of objects and dress accessories. Over half the non-ferrous objects from Coppergate, York, were made of brasses with a further 10 per cent being leaded (Bayley 1992d, 808). Furthermore, a breakdown of the alloy composition of different artefacts by date revealed that there was an upsurge in the use of these brasses from period 4b onwards, dated to the mid 10th century (ibid., 809). A comparison of the Coppergate evidence with similarly high incidences of brasses from Viking-age contexts at Flaxengate, Lincoln, and Hedeby, Schleswig-Holstein, prompted Bayley to suggest Scandinavian involvement in the access to fresh supplies of this alloy (ibid., 810).

Research of this nature has been less conclusive in establishing the relationship between specific alloy compositions and artefact-types or sub-groups of artefacts. Blades, for example, in his analysis of non-ferrous finds from Brandon, Suffolk, concluded that "there was no apparent correlation between the alloy used and artefact typology" (Blades 1995, 148). However, Wilthew's analysis of the Hamwic finds did produce some correlation between alloy composition and artefact type. The analysed brooches, for example, were all of bronze or leaded bronze whilst most of the buckles and strap-ends were of brass and leaded brass (Wilthew 1996, 68). These conclusions should be treated with caution as the quantity of some of the individual artefact types sampled was very small, in this case only four brooches, five buckles and twelve strap-ends.

Work relating to varying alloy compositions on Mid-Late Saxon artefacts has focused on the scientific analysis of coinage (Metcalf & Northover 1989; Gilmore 1987) and pins (Wilthew 1996; Caple 1986). In his analysis of pins from Hamwic, Wilthew noted "some correlation between the typology and composition of the pins"

(Wilthew 1996, 67). Nearly all the spherical and spiral-headed pins were of leaded bronze, for example, suggesting decorative sub-groups within these types had little or no effect on alloy composition. In the case of bi-conical-headed pins, those with simple bi-conical heads were either brass or leaded brass as opposed to other head-forms which were of leaded gunmetal, leaded bronze or bronze (ibid., 67). These tentative conclusions led Wilthew to suggest that the compositions of alloys for the production of the Hamwic pins was being controlled at a limited number of manufacturing sites (ibid., 68). Unfortunately, his study did not extend to a comparison of the alloy composition of different pins and their individual method of manufacture.

Additionally, some analytical research has attempted to explore the possible relationships between alloy composition and particular methods of decoration. Oddy, for example, has noted an association between Roman gilded copper-alloy objects with alloy compositions characterised by low lead and zinc contents (Oddy, LaNiece & Stratford 1986, 6-7). This is related to the process of fire-gilding which works best on alloys low in these constituents, the ideal being a relatively pure copper. Analysis of Anglo-Saxon artefacts (ibid., Appendix 1), including several from the site of Hamwic (Oddy 1996), revealed no association, suggesting that either the understanding of the importance of drastically reducing the lead content in copper alloys destined to be fire-gilded was lost, or the smiths had lost the knowledge of how to refine scrap bronze to remove the lead (Oddy, LaNiece & Stratford 1986, 7). The same conclusion was also reached in relation to enamelled objects, although this was qualified by an admission to the small number of objects analysed, and their wide geographical and chronological range (ibid., Appendix 1).

Several strap-ends have been analysed as part of this general research outlined above (see Table 5.1), and within other specialist studies (Stapleton et al. 1995). At present, their number is too small to draw any conclusions on the relationship between alloy composition and morphological and/or decorative sub-groups. The twenty-five analysed comply with the general preference for pure brass alloys noted

as being characteristic of Mid-Late Saxon alloy types, thirteen being of brass with a

STRAP-END/SOURCE OF INFO.	ALLOY COMPOSITION *
Ipswich (cat. no. 119; Blades 1995, 104)	Brass
Ipswich Buttermarket (cat. on. 638;Blades 1995, 105)	Brass
Brandon (cat. no. 957; Blades 1995, 105)	Bronze
Brandon (cat. no.116; Blades 1995, 112)	Brass
Brandon (cat. no. 803; Blades 1995, 112)	Brass
Brandon (cat. no. 840; Blades 1995, 112)	Brass
Brandon (cat. no. 841; Blades 1995, 112)	Brass
Brandon (cat. no. 730; Blades 1995, 112)	Brass
Brandon (cat. no. 479; Blades 1995, 112)	Brass
Brandon (cat. no. 1066; Blades 1995, 112)	Brass
Brandon (cat. no. 117; Blades 1995, 112)	Leaded bronze
Hamwic (cat. no. 27; Withew 1996, Table 5)	Leaded gunmetal
Hamwic (cat. no. 493; Withew 1996, Table 5)	Mixed composition with small amounts of Ag.
Hamwic (cat. no. 492; Withew 1996, Table 5)	Leaded gunmetal
Hamwic (cat. no.491; Withew 1996, Table 5)	Leaded brass
Hamwic (cat. no. 495; Withew 1996, Table 5)	Leaded bronze
Hamwic (cat. no. 489; Withew 1996, Table 5)	Leaded brass
Hamwic (cat. no. 517; Withew 1996, Table 5)	Leaded brass
Hamwic (cat. no. 490; Withew 1996, Table 5)	Brass
Hamwic (cat. no. 498; Withew 1996, Table 5)	Leaded gunmetal
Hamwic (cat. no. 488; Withew 1996, Table 5)	Brass
Unprovenanced (cat. no. 321; Stapleton et al. 1995)	Leaded gunmetal
Bawsey (cat. no. 827; Stapleton et al. 1995)	Leaded brass
Poundbury (cat. no. 773; Keen 1988)	Copper, with only minor proportions of lead, zinc and iron

Table 5.1: Alloy composition for strap-ends previously subjected to scientific analysis

* For explanation of alloy nomenclature see Wilthew 1996, 66, fig. 28.

further four of leaded brass. These alloy types account for nearly 70 per cent of the sample. Bronze, leaded bronze, leaded gunmetals and silver alloys are also represented in the sample but, as yet, their numbers are statistically insignificant.

The unusually pure copper content of the Poundbury strap-end is especially interesting in light of its distinctive enamelled ornament (see below). This may be suggestive of alloy selection for this particular method of decoration.

Considering the suggestion that more than one technique was used in the production of strap-ends, it is possible that scientific analysis of the strap-end database may indicate a relationship between the method of manufacture and alloy composition. One would expect cast strap-ends to be of leaded alloys, and conversely wrought examples to be purer binary alloys, brasses in particular. In this technical discussion, the considerable skills of the contemporary metalworker who would have relied upon his or her trained senses to assess accurately the properties of a particular alloy should not be forgotten. With so few strap-ends analysed, the predictions outlined above are purely speculative, their discussion has highlighted, however, the considerable potential of such a study on the large and diverse strap-end database.

5.5 Rivets: their design and manufacture

Various metals were used in the production of rivets used to fasten strap-ends to their attendant straps. These metals were not always the same as those associated with the main body of the strap-end, though there are some correlations. All of the de-luxe Class A silver strap-ends, for example, were accompanied by silver rivets, often with dome-shaped heads (e g. cat. no. 242, Fig. 3.1B). It is most likely that this form of rivet was fashioned to imitate the ornamental bosses, long recognised as a distinctive feature of 9th-century Trewhiddle-style metalwork (Wilson in Wilson & Blunt 1961, 105). Accordingly, a number of Class A strap-ends sport decorative bosses or rivets, including published examples from Long Wittenham, Oxon (cat. no. 544), and

Bishopstone, E. Sussex (cat. no. 229), as well as an unprovenanced metal-detected find recorded at Bonhams (cat. no. 486, Fig. 3.12B).

It should be noted that dome-headed rivets were also popular on continental Carolingian 9th-century metalwork, which went on to influence the Anglo-Saxon series of 10th-century Class E strap-ends. Various Carolingian strap-ends with either silver or copper-alloy dome-headed rivets have been discovered, including those from Muysen, Belgium (Fig. 6.7C), Hedeby, Schleswig-Holstein, Germany (Capelle, 1964, taf. 1, no. 1), and Domburg, Holland (Capelle 1976, taf. 18, no. 317) as well as others from Viking graves (Wamers 1986, taf. 43, no. 3 & taf. 44, no. 1). Similar rivets are also used on trefoil and oval-shaped mounts which sometimes accompany strap-ends as part of en-suite sword-belts. These were not only used to fasten the mounts to the straps to which they were attached, but also formed 'striking decorative accents on their display faces' (Mitchell 1994, 138). Within this country, rivets of similar design are seen on several of the tongue-shaped variety of strap-end, including the finest of the cast copper-alloy examples from excavations in Winchester (cat. no. 1122, Fig. 3.24A), and also, from the same city, on an Anglo-Scandinavian silver-gilt specimen (cat. no. 1258, Fig. 3.30A).

On occasion, humbler copper-alloy strap-ends were customised with rivets in precious metals, most commonly silver, examples coming from Soham, Cambs (cat. no. 406, Fig. 3.7C), Westmeston, E. Sussex (cat. no. 390, Fig. 3.6G) and Bamburgh, Northumberland (cat. no. 412). Metallurgical analysis has also identified the use of a rare, gold-containing alloy known as 'Corinthium bronze' for rivets on at least two Class A strap-ends (cat. nos 321 & 827; Stapleton et. al 1995). This has a characteristic black patina, used in this context to contrast with the golden colour of the polished metal of the strap-ends. In addition to the rivets identified during this analysis at the B.M., a further contender includes the extant right-hand rivet on a Class A strap-end from Ellesborough, Bucks (cat. no. 186) though this awaits confirmation by future analysis.

The vast majority of cu-alloy strap-ends were provided with rivets of the same material as their bodies, though it is impossible to be certain whether they were from the same source or of the same alloy composition without scientific analysis. A significant number of copper-alloy strap-ends are also provided with iron rivets, suggesting that in some cases they could have been made from the by-products of ferrous metalworking. Their simple design and small size meant that they could have easily been produced from off-cuts and other metalworking waste when required, as is evidenced by the existence of repair-rivets used to secure split-end breakages.

An intriguing piece of evidence of the manufacture of rivets, though from a Roman context, comes from the excavated site of Baldock, Herts. This consists of a cast square-sectioned copper-alloy bar, roughly eight centimetres in length, from which several dome-headed rivets could be fabricated (Fig. 5.2C). This suggestion is indicated by the presence of a completed rivet at one end of the bar, prior to its detachment for use. This method would allow the manufacture of several similar sized rivets from the same piece of metal and in the context of the form of rivets observed on Late Saxon strap-ends, would also have produced examples with square-sectioned shafts.

Rivets come in a variety of forms and sizes, with a range of head-shapes, commonly with square-sectioned shanks which are 'burred-over' at the back to secure the rivet in place. As mentioned above, dome-shaped heads are particularly common, especially during the 9th century, though in certain cases rectangular heads were also used. In some instances, it appears that little effort was made to provide a coherent head shape, and instead the front end of the shank was crudely flattened with a hammer.

The number of rivets used was dependant upon the form of the strap-end to which they were attached. Class A strap-ends most commonly incorporate two rivet holes for attachment, though 10 per cent of the database for which rivet-number could be calculated were fastened by a single rivet. The use of single rivets was more

common on strap-ends whose slender dimensions and delicacy suggest that they were associated with lighter straps. One such case is the series of narrow shafted Class C strap-ends from Hamwic (Fig. 3.23A).

Many of the more robust tongue-shaped strap-ends introduced during the 10th century were fastened with an increased number of rivets. More than 35 per cent of the database, for which information was attainable, consisted of strap-ends fastened with three or more rivets, with some examples having as many as five. Despite this, over half of the representatives of this type continued to be fastened by a pair of rivets, a fact that may relate to the continuing influence of the 9th-century form on later developments.

5.6 Decorative techniques and materials

Various metals and materials were used in lesser quantities for the decoration of strap-ends, reflecting the extensive repertoire of decorative techniques at the disposal of the Late Saxon metalsmith. In many cases, the desired aesthetic effect required expensive raw materials applied with consummate skill, evidence of extensive experience with such procedures and substances. Strap-ends were very much a product of their age, their decoration often reflecting the latest contemporary fashions illustrated not only by other ornamental metalwork, but also other media, such as sculpture and manuscript illumination.

At a general level, the strap-end evidence accords with the established view on the various technical and stylistic components which characterise these prevailing Late Saxon fashions in metalwork. At a greater level of acuity, however, the potential of such a large and variable database to reveal the popularity and prevalence of certain decorative techniques is being realised. Past opinion on the use of enamelling during the 9th century for example, based upon a limited number of predominantly high-status objects, must now be modified in light of the new evidence provided by this research. Before proceeding, it should be pointed out that this section is restricted to

presenting the repertoire of decorative techniques and materials displayed rather than their stylistic attributes, which will be developed in Chapter 6.

5.6.1 Metal coatings: gilding, silvering and tinning.

The body of a strap-end was occasionally coated with a different metal, sometimes silver or gold, but more commonly tin or a tin-lead mixture. While enhancing the appearance of a strap-end, 'tinned bronze was the poor man's silver' for example (Oddy 1980a, 129), these coatings would have also provided a corrosion resistant surface. This explains the particular association of such decoration with iron strap-ends, the group of five from Coppergate, York, being notable examples (cat. nos 1374-7, Fig. 3.34G). Some strap-ends have tinning restricted to their undersides suggesting it may also have been applied to prevent wear and/or discoloration of clothing. The process of applying such coatings is discussed by Ottaway, in the case of tin plating on iron artefacts (Ottaway 1992, 486-92), tinning and gilding on copper-alloy and silver by Oddy (1980; 1996) and silvering by La Niece (1993). It should be noted that it is often impossible to distinguish between silvering and tinning from superficial observation (ibid., 201).

In line with contemporary fashions, gilding re-emerged as a method for decorating ornamental metalwork during the 10th century, after a relative period of neglect during most of the preceding century. There is a particular association between Class E strap-ends and gilt decoration, both of which were indebted to continental Carolingian traditions in metalworking. Gilding is seen elsewhere on key pieces of late 9th/10th- and 11th-century metalwork such as the spouted jug or 'cruet' in the British Museum (Backhouse et al. 1984, cat. no. 72), the portable reliquary from Winchester (ibid., cat no. 12) and the Pitney brooch (ibid., cat. no. 72). Perhaps its most notable appearance on strap-fittings occurs on the silver-gilt strap-end and mount discovered during excavations at the Old Minster, Winchester (cat. no. 1258, Fig. 3.30A & Hinton 1990, no. 1058) and the en-suite silver-gilt strap-end and buckle

from the Viking burial at Balladoole on the Isle of Man, considered to be of Carolingian manufacture by Wilson (cat. no. 1279).

A different method of enhancing the copper-alloy body of a Class A strap-end, unparalleled elsewhere in the corpus, is provided by an example from Middle Harling, Norfolk (cat. no. 408, Fig. 3.7E). In this case, a decorated silver front plate has been riveted to the copper-alloy body with four silver rivets.

5.6.2 Inlaying with precious metals

The application of decorative inlays to 9th-century strap-ends was particularly common. Nearly 45 per cent of the overall database of strap-ends were positively identified as having inlays of some variety. The original total is likely to have been even greater considering the likelihood that many of the inlays were lost during use, during deposition, or by overzealous cleaning.

Inlaying in silver or gold was used to provide a contrast in both the colour and surface reflectivity of the finished strap-end. The metal inlays could be applied either as plates inlaid into the body of the strap-end and subsequently incised or engraved with the intended patterns and motifs, or applied in smaller quantities, as melt, in the interstices of engraved decoration. Strap-ends representing the former technique include those with silver inlays from Christ Church College, Canterbury and Dymchurch, Kent (cat. nos 247 & 536, Fig. 3.13B) and a metal-detected example from High, Easter, Essex (cat. no. 421, Fig. 3.9A), which is especially ornate with thirteen separate inlaid gold panels, similar to those on the Strickland brooch (Bruce-Mitford 1956, 190-3, pl. XXVI a). Inlaid gold is also used on the silver strap-end from Kroken, Fjære, Aust Agder, Norway (Appendix 2; Wamers 1985, cat. no. 112, taf 29, no. 6).

In some instances, silver and gold inlays were also used to decorate iron strap-ends. Silver was inlaid into a series of parallel transverse grooves on a strap-end from the

Middle Saxon iron-smelting site at Ramsbury, Wilts (cat. no. 967). A more elaborate example, discovered in the Abbey Orchard adjacent to St Albans Cathedral, has inlaid gold forming bands on the shaft and a panel of interlace on the expanded split-end (cat. no. 978). The technique of inlaying precious metals into iron objects had a long tradition in the Anglo-Saxon period. It was widely practised in the Early Saxon era (Evison 1955), as evidenced on a variety of grave-goods, though it continued to be popular into the Late Saxon period, especially on weapons such as swords and axes.

The application of smaller quantities of silver as a ground to highlight engraved decoration was by far the commonest of the two techniques and a similar result was achieved in a variety of materials (see below). This decoration could have been attained in a similar fashion to that proposed for the silver inlays on the back of the Tara brooch (Whitfield 1997). In this case, the designs were first etched or engraved into the body of the object and then the recesses completely filled with a silver solder alloy mixture and a flux, and carefully heated to the melting point of the solder. When this temperature was reached, the silver alloy would melt in the channels and bond to the surface of the metal. The technique is associated with a range of decorative motifs, from simple geometric patterns to more complex designs, perhaps the most striking being the copper-alloy strap-end from York (cat. no. 732, Fig. 3.16E), which uses both silver and copper inlays to enhance its striking decorative composition of a naked human figure flanked by a pair of Trewhiddle-style beasts.

The continuity of such techniques into the 10th century is evidenced on a Class E strap-end from Ixworth, Suffolk (cat. no. 1149). Here, silver inlay is used to highlight the central contours of some of the Winchester-style bird and plant motifs which adorn its front surface. This is an isolated example of applied decoration on the 10th-century series which relied more heavily upon cast and relief decoration, though inlaid decoration has been recognised on contemporary copper-alloy objects such as the Canterbury censer-cover (Backhouse et al. 1984, no. 73) and several stirrup-strap mounts (Williams 1997, e.g. fig. 25, no. 70).

5.3.3 Vitreous inlays

Vitreous inlays, of both niello and enamel, are also common on 9th-century strap-ends, especially in association with Trewhiddle-style decoration. The use of niello on Trewhiddle style metalwork has long been recognised (Wilson in Wilson & Blunt 1961, 21), and this association is a particular hallmark of the silver objects deposited in 9th-century hoards such as Trewhiddle and Talnotrie.

The particular chemical composition of niello and its method of application have been discussed in detail elsewhere (LaNiece 1983; LaNiece & Stapleton 1993). To summarise, analysis of the niello used on a range of contemporary Mid-Late Saxon artefacts has revealed two compositional types, the choice of which was seemingly heavily influenced by the metal to which it was applied (LaNiece 1983). The majority of copper-alloy objects sampled were associated with a mixed silver/copper sulphide niello. The niello work on silver and gold objects, however, was often characterised by a silver sulphide composition. Despite this, taken alone, evidence provided by the five nielloed strap-ends included within this analysis (three of brass, one of bronze and another of silver) appears to contradict this general rule. The silver strap-end from Whitby, for instance, was inlaid with a mixed niello of silver/copper sulphide (cat. no. 242, Fig. 3. 1B). Two of the brass strap-ends, on the other hand, made use of the silver sulphide variety.

Enamel has been positively identified on 122 strap-ends, a total representing both new discoveries and scientific analysis of old examples (Stapleton et al. 1995). In addition, there are a further nineteen examples with missing settings that could have also originally been enamel. This new evidence challenges the traditional view on enamelling encapsulated in the following statement "if it is scarce up until then [the 8th century] then it becomes much more so in the later Anglo-Saxon period, though the best known pieces are rather spectacular" (Bateson 1987, 5).

The type of enamelling used on strap-ends is referred to as champlevé - the term used to distinguish enamel held in fields which are sunk into the body of the artefact - having been gouged out or cast in the initial manufacture. This should not be confused with the cloisonné technique where the enamel is contained within cells perpendicular to, and above, the surface of the metal. It should be noted, however, that both techniques were in use during the Late Saxon period (Evison 1977). The composition and techniques associated with the application of early medieval enamels have been researched in detail by others (Bacon & Knight 1987; Youngs 1995; Buckton 1982).

Within north-west Europe, there is growing evidence of an unbroken tradition of champlevé enamelling from the Pre-Roman Iron-Age, through the early medieval period and well into the middle ages, when it reached a peak of accomplishment in the 12th-century workshops on the river Maas and on the lower Rhine (Buckton 1982, 102; Scull 1985; Youngs 1995). Despite this general continuity, the popularity of this form of decoration was subject to fluctuation in different places at different times. Prior to the mid 9th century, Anglo-Saxon enamelling was likely to have been influenced by Irish enamel-work, which, had by the middle of the preceding century, had achieved a height of technical brilliance (Youngs 1995, 38). After this date, one must also acknowledge the growing influence of continental Carolingian enamelling which had been revived during the 8th and 9th centuries (Buckton 1982; Haseloff 1990).

One of the major problems encountered with enamels on archaeological finds is reconstructing their original appearance. This point has been voiced by Parrott "the most frequently asked question - what was the original colour of the enamel - is one of the most difficult because so many changes may have taken place. In fact few archaeological enamels observed have retained their true colour" (1987, 7). In many cases, only scientific analysis can reveal the original colour and transparency of the enamel by identifying its compositional elements. Early medieval red enamels are characterised by the presence of substantial percentages of lead oxide and lesser

quantities of cuprous oxide, for example (Hughes 1987, tables 2 & 3). Even with such measures, however, the elements present may represent one of a range of possible alternative colours. In some cases, it may be possible to establish the original colorants in a weathered enamel by analysis of the components of the corrosion products. Red enamels, for instance, often deteriorate to either a greenish or a whitish powder tinged with green on weathering, representing two reduced states of the original cuprous oxide colorant (Hughes 1987, 11).

On strap-ends, the champlevé enamel could be used on its own in larger panels (see Type A4, Chapter 3), or like niello, as a ground to engraved decoration to highlight patterns and designs. Analysis of an unprovenanced strap-end in the B.M. (cat. no. 321, Fig. 3.5A) revealed that the decoration on the main panel depicting a looping Trewhiddle-style beast was set against a field of opaque champlevé enamel, which was originally red in colour, but due to weathering appeared green (Stapleton et al. 1995, 387).

Examination of the strap-end from Poundbury, Dorset (cat. no. 773, Fig. 3.17E), revealed a light green weathered enamel containing high proportions of both copper and lead, with minor quantities of calcium, iron, zinc and tin. This composition suggested that the enamel used cuprous oxide as a colorant to produce an opaque red (Keen 1988, 196). The enamel on this example was used in association with a highly distinctive form of decoration consisting of closely-spaced punched annulets, an enamelled design seen elsewhere in the corpus. It is interesting that in some cases these specialised techniques were accompanied by their own stylistic adaptations, as seen most clearly on the series of silver-wire strap-ends discussed below.

The results of scientific examination of the enamel on a strap-end from Trowbridge, Wilts (cat. no. 475, Fig. 3.11D), proved more ambiguous. In this instance, the presence of copper, lead and tin could have produced a green, orange, red or white colouring (Graham & Davies 1993, 83).

Investigation of the strap-end database has highlighted the popularity of another related technique, which hitherto has gone largely unnoticed in the study of Late Saxon ornamental metalwork. This was the use of highly distinctive decorative inlays in the form of delicate scrolls of silver wire set into niello or, in some cases, enamel (see chapter 3, Types A5 and B2; Thomas 1996). The distribution of strap-ends and hooked tags decorated in this manner is concentrated in East Anglia, suggesting the existence of one or more workshops specialising in their manufacture during the 9th century. A method for producing such decoration on strap-ends has been proposed by comparison with observations on similarly decorated panels on the Steeple Bumstead Boss from Essex (Youngs 1993). The first stage was to gouge the recess to hold the applied setting in the main body of the strap-end, the upper surface of which was keyed to facilitate adhesion to the niello or enamel. The pre-fabricated wire, produced by hammering or rolling, was then twisted into the desired patterns and placed into the niello while still soft and paste-like. On cooling, the uneven surface would then have been ground until the wire patterns were flush and exposed in section.

Before bringing this discussion of decorative techniques to a close, mention should also be made of the unparalleled use of inlaid panels of gold filigree decoration on a pair of silver Class A strap-ends from Ipsden Heath, Oxon (cat. no. 430, Fig. 3.9B). In their use of obliquely-beaded wire hammered flat and applied on-edge in the form of a strip, with a serrated margin, their decoration may be to compared to filigree applied on other Late Saxon metalwork, including the King's School Canterbury disc brooch (Wilson 1964a; 40-2, cat. no. 10, pl. XV), and a gold plaque from Winchester (Backhouse et al. 1984, no. 78), both dated to the 10th century. A closer 9th-century parallel for the use of similar serrated-band filigree is provided by the Seine sword pommel (Wilson 1964a, cat no. 66).

5.7 Summary and conclusions

A study of materials used in strap-end production indicated that copper alloy was the commonest metal, for both the bodies of strap-ends and their attendant rivets. The few strap-ends sampled as part of analytical research into contemporary alloy compositions followed the general trend for using brass alloys during this period. Discussion highlighted the considerable potential of future research to reveal relationships between alloy composition and likely methods of manufacture, as well as types of decoration. The use of other materials such as silver, lead and bone was more limited and was strongly related to the chronology of the series, silver being almost exclusive to 9th-century strap-ends and the latter materials to the 10th-century Class E variety.

A number of alternative methods for the manufacture of strap-ends were then presented. For the Class A variety, cast production and two variants on a wrought technique were suggested. The evidence for cast production during this period - consisting of a few pieces of metalworking detritus such as moulds and models and the results of a detailed examination of the objects themselves - suggests that its use was limited in comparison to the wrought methods. This conclusion was found to concur with evidence of the growing popularity of sheet-metal technology provided by other contemporary artefacts.

By the 10th century, the strap-end database suggests that this situation had been reversed - the majority of tongue-shaped strap-ends being cast. It is likely that this technological change accompanied the enthusiastic adoption of the more robust Continental tongue-shaped form during this period. In many instances, this method was intrinsic to the execution of the heavy relief and open-work decoration which characterises much of the ornamental metalwork of this era.

The number of decorative techniques associated with 9th-century forms was far more variable, reflecting the full repertoire of those practised by the contemporary

metalworker. While much of the database consists of simple incised and engraved decoration, there is also evidence of the widespread use of composite designs involving applied decoration in the form of decorative inlays of varying kinds.

These interpretations have important bearing upon an assessment of the nature and scale of the contemporary production systems which gave rise to these artefacts. This theme will be explored more fully in Chapter 8, by drawing extensively upon the evidence and conclusions presented above.

CHAPTER 6: CHRONOLOGY

6.1 Introduction

This chapter endeavours to construct a chronological framework for the dating of Late Saxon and Viking-age strap-ends. This framework is founded on a range of evidence categorised under four main headings: 1) Coin-hoards; 2) Archaeological finds; 3) Metal-detected 'productive' sites; and 4) Art-historical analysis. Three of the criteria used in the dating of strap-ends belong to Wilson's hierarchy applied to the dating of Late Saxon ornamental metalwork in general (see Wilson 1964a, 5-9), the exception being Category 3: Metal-detected 'productive' sites. These, as the name suggests, constitute a phenomenon associated with the last twenty years of metal-detecting activity. Before establishing a chronology for the main morphological classes of strap-end, the potential of the individual dating criteria will first be assessed. Secondly, the discussion will be given a wider context through consideration of the origins and development of strap-end usage prior to the period under scrutiny.

6.2 Dating methods

6.2.1 Coin-hoards (see Table 6.1)

Coin-hoards are one of the most reliable forms of dating evidence, second only in Wilson's hierarchy to association with a known historical figure by contemporary inscription or burial. Ornamental metalwork contained within mixed hoards is dated in accordance with associated coins, as summarised by Graham-Campbell (1982b, 36):

> The simplest form of coin-dating is to estimate the date at which the latest coin in the hoard was struck, which therefore establishes a date after which the hoard must have been buried. With the larger hoards, however,

> numismatists are able to estimate the deposition date more closely by also considering which coins are absent that should reasonably have been present had the hoard in question been of later date.... When it is possible to establish a deposition date of a mixed hoard, then it is certain that the ornaments that it contains must have been made before that date. By taking into account the contents of other such coin-dated hoards, archaeologists can gradually build-up a framework of dates for when different types of object were in fashion, as also for changing art-styles used to decorate them.

The major caveat highlighted by this description is the fact that coin-dated deposition only provides a *terminus ante quem*, i.e. the date before the associated objects must have been manufactured. By extension, one should be aware of the possibility that the objects contained within a hoard may have been in circulation for a considerable period of time before their eventual concealment (see Wilson 1959, 119).

The accuracy of this method is entirely dependent upon numismatists' ability to estimate a deposition date for the hoard. Obviously, this task is complicated if there is an incomplete record of the coins originally present at the time of burial, as is the case with several of the larger antiquarian discoveries. In such instances, the loss of key coins or parcels of coinage may lead to erroneous estimates (see Brooks & Graham-Campbell 1986, 109).

One further point relates to a bias in the chronological distribution of hoarding in England during the Late Saxon period (see Wilson in Wilson & Blunt 1961, 107-8). Viking activity was responsible for the comparative abundance of hoards deposited during the second half of the 9th century, especially between 865 and 879 (Brooks & Graham-Campbell 1986, 107; Graham-Campbell 1992, 107). Three of the seven British hoards which contain Late Saxon strap-ends belong to this phase: Trewhiddle, Cornwall (c. 868); Beeston Tor, Staffs (c. 875); and Talnotrie, Dumfries & Galloway (c. 875) (see Table 6.1).

Hoard	Strap-end number/Class	Associated artefacts (excluding coins)	Interpretation	Deposition date based upon numismatic evidence (see Blackburn & Pagan 1986)
Krogen, Aust-Adger, Norway (Wamers 1986, cat no. 112)	**1** (Type A1b, Appendix 2)	Silver Carolingian cross, (lost) arm-ring and beads.	Small Viking hoard	A single Arabic coin pierced for use as a pendant provides a terminus post quem of c. 778/9
Sevington, Wilts (Wilson 1964a, 169)	**8**; 1 finished (Group A1a,xii, cat. no. 395); 7 (Class A's at various stages of manufacture, cat. nos 135-141)	Cu-alloy buckle-plate, cu-alloy roundel, scrap gilt cu-alloy fragment, 2 silver 'spooned' utensils.	Anglo-Saxon metalworkers hoard.	c. 70 coins, deposited c. 850
Trewhiddle, Cornwall (Wilson & Blunt 1961)	**4, 2 pairs**; (Class A1a,i, cat. no. 237 Class L, cat no. 1366)	Various silver ornaments including 2 horn- mounts, pin, box-shaped mount, buckle, chalice, scourge, penannular brooch, now lost are 2 silver rings, a gold pendant and ingot.	Contains parcels of coins of varying dates making accurate dating problematic. Unique mixture of secular and ecclesiastical objects consonant with a hoard formed from several discrete metalwork assemblages.	115 coins, deposited c. 868.
Beeston Tor, Staffs (Wilson 1964a, 120)	**1** (Type J1, cat. no. 1343)	3 rings (1 silver, 2 cu-alloy) 2 silver brooches.	Anglo-Saxon hoard. Deposition possibly associated with Viking Great Army at Repton in 873-4.	49 coins, deposited c. 875
Talnotrie, (Kirkcudbrightshire), Dumfries & Galloway, Scotland (Graham-Campbell 1995, 4, fig. 4)	**1** (Group A1a, iv, cat. no. 273)	Pair of disc-headed pins, gold finger-ring, lead weight mounted with cu-alloy disc of insular manufacture. Cake of wax for metalworking. Other materials for fine metalworking.	Possibly a metalworkers cache. Could be associated with the campaigns of Ivar the Boneless amongst the Strathclyde Britons in 870-1, or Halfdan's ravaging amongst the Picts and Scots in 874-5.	13 coins, deposited c. 875.
Cuerdale, Lancs (Graham-Campbell 1992)	**1** (Group A1b, ii, cat. no. 539)	Hacksilver and ingots	Viking hoard	c.7000 coins, deposited c. 905
Åspinge, Skåne, Sweden (Wamers 1986, cat no. 152)	**1** (Group E1a, I, Appendix 2)	26 pieces of jewellery and hacksilver.	Large Viking hoard	c. 8700 coins, deposited c. 1047.

Table 6.1: Coin hoards containing Late Saxon strap-ends

This is in contrast to the comparative dearth of mixed hoards from the first half of the 9th century (see Blackburn & Pagan 1986). The earliest mixed hoard of the century containing a strap-end is Sevington, Wilts, dated to c. 850, with the possible exception of the gilt strap-end from Krogen, Aust-Agder, Norway. This hoard is only dated by a *terminus post quem* of 778/9 provided by a pierced Arabic coin

(Wamers 1986, cat. no. 112, pl. 29.6), and was most probably deposited during the second half of the 9th century (Graham-Campbell pers. comm.).

Without coin-dated metalwork from the crucial period spanning the last quarter of the 8th and first half of the 9th centuries, one lacks any firm chronological pins on which to fix, not only the origins and early development of several of the strap-end classes discussed in the survey, but also Trewhiddle-style metalwork in general (see below). At the same time, it should not be assumed on the basis of the hoard evidence that the third quarter of the century represents a core period in the production of Trewhiddle-style metalwork. Sevington demonstrates that standard 9th-century artefact types, and the Trewhiddle-style decoration with which they are associated, were already fully developed by the middle of the century.

Looking forward in time, severe lacunae are also imposed on the chronologies of classes traditionally dated to the 10th and 11th centuries due to the small number of coin-dated mixed hoards deposited in England during this period, the only example containing a strap-end being Cuerdale, Lancs, dated to c. 905. In addition, there is an Anglo-Saxon strap-end in the large hoard from Äspinge, Skåne, Sweden, conventionally dated to c.1047 (Wamers 1986, cat. no. 152, pl. 29.5).

6.2.2 Archaeological finds (including settlement-sites, coinless hoards and grave-finds, see Appendix 3)

The degree of accuracy possible when dating finds by means of association, whether from archaeological excavations of settlement sites and graves or from the closed contexts provided by coinless hoards, is largely dependent upon the nature of the archaeological deposits encountered and the excavation methodology used to identify, retrieve and record stratigraphic information. Obviously, the optimum potential for dating is associated with those sites with securely stratified contexts which have been excavated and recorded to a high technical standard.

Most of the strap-ends discovered on sites excavated during the 19th and first half of 20th centuries have little or no contextual information, thus denying the possibility of dating them by material retrieved from the same context. Sites afflicted by poor levels of recording include Richborough, Kent, and various urban sites in York, London, and Southampton. A classic example is the monastic site of Whitby, N. Yorks, excavated in the 1940s, where, due to poor recording, all the finds - including fifteen Class A strap-ends - are effectively unstratified (Cramp 1976, 453-7). In this instance, a broad date range for the objects is provided by historical references recording the foundation of the monastery in 657 and its eventual destruction by the Danes in 867. In certain cases, however, stratigraphic levels, such as the ecclesiastical centre at Winchester, may be closely dated by historical references. One of the strap-ends from the Cathedral Car Park excavations, for example, was retrieved from a context directly associated with the robbing of the Roman forum during the construction of the New Minster - recorded as having taken place c. 901-3 (cat. no. 423). In addition, the Anglo-Scandinavian strap-end and belt-slide from the Cathedral Green excavations were discovered in a context related to the robbing of the Old Minster, recorded as demolished in 1093-4 (cat. no. 1258).

When it is clear that a strap-end is residual in a later deposit or intrusive in an earlier level, then the opportunity to date the find by association or absolute means is lost. Unfortunately, artefact residuality is a major factor of many of the sites producing Late Saxon and Viking-age strap-ends, especially on urban excavations and sites with long periods of occupation involving disturbance or redeposition of earlier deposits during later phases of activity. Coinage, due to the fact that it may be fairly accurately dated, is a useful signpost for highlighting levels of artefact residuality (see Archibald 1987, 264-5). In Anglo-Scandinavian levels at Coppergate, for example, coins were often found in contexts dated 75-100 years later than their striking (Ottaway 1992, 463). Similarly, at Hamwic, single sceattas were often discovered in contexts attributed a later date on the basis of pottery seriation (Hodges 1981, 46, 51).

Artefact residuality was also found to be widespread at Flixborough, S. Humb, a factor linked to the accumulation and periodic dumping of midden deposits across the site (Loveluck pers. comm.). This is largely responsible for the fact that twenty-one out of the total of twenty-seven Flixborough strap-ends are from residual or unstratified contexts. Residuality at Winchester necessitated two dates being attached to catalogue entries in the published find report (Biddle 1990): one for the archaeological context, based primarily on pottery phasing; and a second independent date for the artefact itself, based on typological and/or art-historical grounds. In the case of the strap-ends, rarely do the two dates coincide; of the total of fifteen from the city, nine are considered to be residual in later contexts or else unstratified. The same problem is repeated for many of the other sites yielding strap-ends, a factor which has severely reduced the number which may be dated by archaeological means (see Appendix 3).

Another problem encountered with archaeological finds, related purely to pragmatic factors, is the fact that stratigraphic information and site phasing for certain sites was not available at the time of study. This was true for unpublished excavations at Brandon, Suffolk, Wraysbury, Berks, and Canterbury. When combined, the problems associated with obtaining stratigraphic information on strap-ends and the integrity of the archaeological contexts from which they are derived have seriously depleted the number receptive to archaeological dating. An estimate is that, out of a total of c. 290 excavated strap-ends, only one third derive from contexts which have been recorded in sufficient detail for reliable dating purposes.

It remains to comment on the process of dating a strap-end or other artefact assuming it belongs to a securely stratified or closed context, such as a coinless hoard or grave. In the majority of cases, in light of the limitations of 'absolute' dating methods, such as radiocarbon dating and dendrochronology (see Wilson 1976, 13), this is usually based on associative dating. In such cases, one is reliant upon the chronologies attached to other artefacts contained within the same context, a method which is consequently plagued by circularity (see Wilson 1959). Coins provide the best

potential for a more refined dating, subject to the cautionary remarks above, though the number of contexts in which coins and strap-ends have been discovered in direct association are few. Archaeological sites with well-developed pottery seriations allow a tighter dating, as at the Six Dials site, Hamwic, where some features have the potential to be dated to one of three Middle to Late Saxon periods: early (c. 700-50); mid (c.750-850); or late (c. 850+) (Andrews 1997). Similarly, at Ipswich, due to the seriation of the local Ipswich- and Thetford-ware traditions, Anglo-Saxon features may be assigned to a Middle Saxon (c. 8th to early 9th century), Early Late Saxon (c. mid-late 9th century), or a Mid Late Saxon (c. 10th century) phase (Keith Wade pers. comm.)

The problem when attempting to refine a chronology for strap-ends using this method is that on many archaeological sites they often represent one of the most diagnostic artefact types discovered, and are thus used as an index for the dating of other finds and, by extension, archaeological contexts (Hinton 1975a, 172-3). As a result, it is the comparatively few sites which have yielded a comprehensive range of datable material, including pottery and coinage, that offer the best potential for dating strap-ends by archaeological means.

6.2.3 Productive sites

'Productive sites', so defined by the large quantities of metalwork and coinage they produce as a result of metal-detecting surveys, have the potential to provide broad date ranges for the artefacts recovered (Newman 1995; Bonser 1997). Such finds have, in most cases, been severed from their original archaeological context, though some like Cottam, N. Humb (Richards 1993; 1995; 1999), and Barham, Suffolk (Newman 1995, 92; West 1998, 6), have been subject to limited archaeological sampling. In the majority of cases, such as South Newbald, N. Humb, and Royston, Herts, the coinage and metalwork reveal that such sites reached a peak in activity during the 8th to 9th centuries (Booth 1997; Bonser 1997), though activity on some sites extends back into the 6th and 7th centuries, such as Coddenham, Suffolk (West

1998, 20-24; Webster pers. comm.), or forward into the 10th century, as at Bawsey, Norfolk (Margeson pers. comm.), and Cottam (Haldenby 1990; 1992; 1994). It is important to note that in order to accurately gauge the economic fortunes of these sites, a comparison must be made between the metalwork and coinage. In some cases, such as Royston, Herts, and Barham, Suffolk, the coinage tells a story of economic decline in the late 7th and 8th centuries, while the metalwork indicates continued, or even accelerated, activity into the 9th (Webster pers. comm.).

A combination of surface sampling techniques and limited excavation at Cottam, N. Humb, highlighted some interesting chronological patterning in the distribution of strap-ends and other metalwork (see Haldenby 1990; 1992; 1994; Richards pers. comm.). These distributions were found to relate to a settlement shift from an Anglian focus, dated to the 8th and 9th centuries, to a later Anglo-Scandinavian settlement belonging to the late 9th and early 10th. Comparison of the distribution of individual types of strap-ends revealed that with one exception, all of the eleven classifiable Type A2 and all Type A5 strap-ends were associated with the earlier Anglian settlement. The other types of Class A strap-end represented on the site, including Type A1 (Trewhiddle-style) strap-ends, were found in both foci in equal numbers. This pattern, if not suggesting that A2 strap-ends were necessarily earlier in date than other types, certainly indicates they were relatively short lived. Meanwhile, both Cottam's Type B4 strap-ends came from the finds scatter relating to the Anglo-Scandinavian settlement, a fact which supports the attribution proposed in the current survey (Haldenby 1990, no. 7; 1992, no. 1; see below).

Cottam provides a test case in the value of productive sites to support dating evidence, especially if combined with field-walking and archaeological sampling. Conversely, the significance of chronological patterning from just one or a limited number of sites should not be over-stressed. The chronological differences apparent in Cottam's Class A strap-ends, for example, may only have local or regional relevance. Nevertheless, future discoveries on these sites, allowing statistical

analysis and comparison of intra- and inter-site assemblages, still holds much potential for dating.

6.2.4 Art-historical dating

In light of the small proportion of strap-ends from well-dated archaeological contexts and coin-hoards, art-historical analysis largely dates the greater part of the corpus. This process involves comparing the morphology and decoration on undated strap-ends, with examples dated more accurately by one of the methods discussed above. More generally, the styles in which strap-ends are decorated may be compared to those which appear on other contemporary artistic media of which the date is fixed in absolute terms. The key well-dated artefacts which act as chronological markers in the dating of Late Saxon ornamental metalwork has been discussed previously (Wilson in Wilson & Blunt 1961, 106-8; 1964, 6-8), and where necessary, will be mentioned in the appropriate sections relating to the dating of individual classes.

The assumptions and limitations that lie behind art-historical dating have been justly qualified and criticised at length in the past, especially by Wilson (1959). One of the most important conclusions to emerge from these critiques is that stylistic variation and typological differences exhibited by a particular class of artefact may equally be the result of regional variation and quality of craftsmanship as of temporal change. In order to place any chronological significance on such differences, one must at least have two absolute dates on which to peg the beginning and end of a typological sequence, in the words of Wilson (1959, 115):

> If typology is to be used for dating purposes, we must have two fixed points, a known starting point (prototype) and a known point later on, preferably at the end of the phase. If we have not these two points we cannot use typology, for differences may be contemporary branches of the main root.

In respect to this requirement, the lack of absolute dates for the period equated with the origins of several of the strap-ends considered in the survey is particularly irksome. Similarly, the considerable lacuna in the fixed chronological points for dating strap-ends into the 10th and 11th centuries has also been noted. Fortunately, due to the relative number of absolute dates, the overall chronology for dating art-styles on contemporary Late Saxon metalwork is more secure than for the Early Saxon period. The use of this chronological framework, however, is necessarily restricted to those strap-ends carrying sufficiently diagnostic ornament to be compared to a mainstream artistic fashions. As a result, the high percentage of the corpus decorated with more abstract, stylised or enigmatic designs can only be broadly dated by comparison of their overall form.

6.3 Origins

Like other dress accessories, such as the brooch and the pin, the multi-purpose strap-end has a long history stretching into classical antiquity. For this reason, in order to contextualise a chronological survey of the classes discussed in this survey, it is first necessary to summarise developments prior to this period.

Strap-ends first become a regular component of dress in Britain during the Late Roman period, when they were invariably used in conjunction with belts as part of standard military regalia (Simpson 1976). Strap-ends of this period have been studied in detail, both in this country (Hawkes & Dunning 1961; Simpson 1976) and on the continent, (Bullinger 1969; Keller 1971; Clarke 1979; Böhme 1974; 1987) and have been classified into four main types on morphological grounds: 1) Amphorae-shaped (Simpson 1976); 2) Heart-shaped (Simpson 1976); 3) Tortworth (so-called from the Gloucestershire find-spot of the classic example, see Hawkes & Dunning 1961, fig. 8); and 4); and Lancet-shaped (Hawkes & Dunning 1961, group 5A; Clarke 1979). All can be dated by associated material from funerary contexts to the late 4th and 5th centuries and have broad geographical distributions within the Later

Western Empire, with the exception of the Tortworth type, which seems to have been manufactured exclusively in Insular workshops (Clarke 1979, 283).

The corpus of Late Roman strap-ends is associated with a wide range of decorative motifs and techniques from simple incised decoration, through rocker traced and punched ring-and-dot to open-work and more elaborate chip-carved decoration. They are also associated with a range of fabrication techniques which appear to have been interchangeable both within and between morphological classes. The majority were solid one-piece castings, though some are formed of sheet-metal plates soldered or riveted together (see Clarke 1979, 279). In the case of the former, the attachment end may be split to take the strap or else a backing plate may be held in place by a rivet or rivets.

Although all four types are approximately contemporary, there is some suggestion that the Lancet type outlived the others to influence subsequent forms. This is suggested on stylistic grounds in the case of the elaborate chip-carved examples which have decoration paralleled on 5th-century Anglo-Saxon metalwork, such as buckles and brooches (Hawkes & Dunning 1961). Ultimately, however, in order to trace such later developments adequately, one must widen the analysis to embrace continental material, especially considering that Anglo-Saxon England lay on the very periphery of what had been the Western Empire, and thus the distributions associated with these Late Roman military belt-fittings. It is in Frankish graves of the 6th century that the continuing influence of the Late Roman Lancet type on the morphology of later 'bayleaf-shaped' strap-ends with keeled upper surfaces is detectable, though the latter are more slender and the waist between the attachment-end and tongue less pronounced (see Chlodwig & Erben 1996, cat. nos V. 4.4h, fig. 317; V.4.8kk, fig. 319).

The marked Kentish distribution of form within Anglo-Saxon England (Evison 1987, 90) suggests that some, such as those from the cemetery at Buckland, Kent, could represent Frankish imports, though it is likely that they were soon copied by Anglo-

Saxon craftspeople (Fig. 6.1A). On some of these Anglo-Saxon versions, the pointed terminal is replaced by a rounded sub-zoomorphic element, as on examples from Kentish cemeteries at Buckland, Finglesham and Polhill (Geake 1997, 64, figs 4.21, 4.22).

This variety had a period of usage spanning the 5th to 7th centuries. An elaborate 5th-century example from Faversham is inlaid with garnets (Fig. 6.1B), though most of the examples from Conversion period graves, dated to the 7th century, are plain and considerably smaller (Geake 1997, figs. 4.21 & 4.22).

The case for continuity between these types of Late Roman and Anglo-Saxon strap-end is also strengthened by the fact that they share the same range of fabrication techniques. The bayleaf-shaped examples from Mill Hill, Kent, for example, are cast, with both split and composite attachment ends, and are also made from two sheets riveted together (Parfitt & Brugmann 1997, figs 35, 63f & g; 39, 69f, 71g; and 33, 38d1 & d2).

Three strap-ends recorded in the survey under the unclassified Group L, could represent members of this type. These examples, which are from Canterbury, Ipswich, and Jarrow (cat. nos 1368, 1370-1, Fig. 3.34A, C & D), suggest that the type survived at least into the 8th century. The Ipswich strap-end was recovered from a Middle Saxon context dating from the mid-8th to early 9th century, whereas the monastery at Jarrow was only founded in 684.

An important distinction between the Late Roman and Early Anglo-Saxon strap-ends relates to their function. The former are usually found singly in association with belt buckles, whereas the latter are found both in pairs and singly in association with a range of straps and belts. Those found in pairs near the legs and ankles, in association with small buckles, are thought, on comparison with continental grave assemblages, to be for fastening shoes or gaiters in the Frankish tradition (Evison 1987, 90). Others are found in association with straps suspended from girdles used

to attach bags and other objects, such as the skimmer and quartz ball from one of the graves at Mill Hill, Kent (Parfitt & Brugmann 1997, 74, fig. 30, c & d). The same range of functional contexts is also associated with a contemporary form of strap-end, or 'lace-tag', constructed from a single sheet of metal rolled into a cone and either clenched or riveted onto a thong or strap (Geake 1997, 64).

In addition to the two Early Anglo-Saxon forms discussed above, there is a widely distributed type of strap-end consisting of two separate sheets of metal, squared at one end and rounded at the other, which are riveted or soldered together. The majority are simply decorated with incised linear designs, such as the example from Dinas Powys dated to the 6th century (Fig. 6.1C), though more elaborate examples are known such as the fifth-century one from Great Chesterford, Essex, decorated with an inlaid silver plate incised with a crouching quoit-brooch style beast (Evison 1994, 177, fig. 157). This type is associated with the same range of functional contexts as those already described.

A fourth group is represented by more robust, cast strap-ends of tongue-shaped form which are also heavily influenced by continental Frankish and Merovingian types (see, for example Chlodwig & Erben 1996, cat. no. V.5.18e). These had a relatively long life-span, as suggested by the range of decorative motifs with which they are associated. One example, from Sarre, Kent, is decorated with Style I ornament dated to the second half of the 6th century (Fig. 6.1D). Another from the cremation burial at Asthall, Oxon, belongs to a suite of belt fittings dated on stylistic grounds to the first half of the 7th century (Fig. 6.1E).

To summarise, by the end of the Conversion period there was a variety of strap-ends in existence. These were multi-functional and could be used singly or in pairs, both with and without buckles. It is possible, particularly in the case of the Bayleaf type, that they continued to be made well into the 8th century, suggesting a period of overlap with some of the main classes encompassed in the present survey. Ultimately, any case for direct continuity between Conversion period and later

Anglo-Saxon strap-ends is hampered by the lack of 8th-century material spanning the critical period associated with the early development of the latter, most notably Class A. However, the characteristic split-end design of most Late Anglo-Saxon strap-ends was almost certainly borrowed from Conversion-period prototypes, even though there is little conclusive evidence for direct continuity in form and decoration. This is not unexpected, given that the late 8th and early 9th century is traditionally viewed as a chronological watershed marking changes in both art styles and artefact types (Wilson 1984, 96), despite some contemporary classes of artefact such as hooked tags and disc brooches, displaying some degree of continuity from the Mid to Late Saxon periods.

6.4 The dating of Class A strap-ends

6.4.1 Coin-hoards

The dating of Class A strap-ends has traditionally rested on coin-hoard evidence, examples derived from the hoards deposited at Sevington, Wilts (c.850), Trewhiddle, Cornwall (c. 868), Talnotrie, Dumfries & Galloway (c. 875) and Cuerdale, Lancs (c.905) (Table 6.1). The fact that all the decorated coin-hoard examples are Type A1 Trewhiddle-style strap-ends has important implications for the general dating of the type, as discussed below.

This evidence alone provides a date range of no more than sixty to seventy years, concluding with a *terminus ante quem* of c. 905 provided by Cuerdale (cat. no. 539). The strap-end from this hoard is heavily 'nicked' (see Graham-Campbell 1992, 109) and worn, however, suggesting that it had been in circulation as Viking bullion for some time before its eventual concealment (Graham-Campbell 1987a, 338). Considering the potential limitations and bias associated with this form of dating (see above), the core date for the production and circulation of Class A strap-ends provided by the coin-hoard evidence broadly corresponds to the 9th century. In

isolation, this evidence is insufficient to elucidate fluctuations in the overall popularity of the class or chronological variations relating to individual types.

6.4.2 Archaeological finds.

A total of 141 Class A strap-ends has been recovered from archaeological excavations for which there is associated contextual evidence (see Appendix 3). However, this figure accounts for no more than fifteen per cent of Class A strap-ends recorded in the survey. A large proportion of all the excavated examples may be discounted for dating purposes on the grounds outlined at the beginning of this chapter, leaving only thirty-two with useful contextual information. Of these, only a few are derived from contexts which can be dated more closely within the 9th century by associated material or historical reference. For brevity, only the most closely dated are mentioned in discussion; information on those examples attributed a general 9th-century or 'Mid-Late Saxon' dating horizon is contained in Appendix 3.

Two Class A strap-ends have been recovered from archaeological contexts associated with a phase of activity dated by historical reference. The first, attributed to Group A1a, xv, derives from a context associated with the construction of New Minster, Winchester, in c.901-3 (cat. no. 422). The second, a Type A5 strap-end from the site of Repton, Derbys, has a *terminus ante quem* of 873-4, on the basis of its discovery in one of the primary make-up layers of the Viking burial mound in the Vicarage Garden (cat. no. 813; see Thomas 1996, 85, cat. no. 22).

A few strap-ends have been discovered in contexts also containing coins (Appendix 3). A split-end fragment from excavations at the monastic site of Jarrow, Tyne & Wear, came from a context also producing a Northumbrian styca dated to c.844 (cat. no. 128; Rosemary Cramp pers. comm.). A Class A strap-end from Whithorn, Dumfries & Galloway, Scotland, was derived from a rubbish deposit which also contained coins dated to c.840 (cat. no. 20; Nicholson & Hill 1997, 375). A Type A1

strap-end from 21-23 Aldwark, York, meanwhile, was found in a pit containing a number of coins, ranging in date from the mid 8th to the mid 9th century, the latest of which was identified as a penny of Burgred of Mercia, c.852-74 (cat. no. 234; Moulden et al. 1999, no. 78). Finally, a context encountered during excavations at St Paul's Square, Bedford, produced a Type A1 strap-end and a halfpenny of Alfred, c. 871-8 (cat. no. 345; Holly Duncan pers. comm.).

The strap-ends from coinless hoards are dated both by association and on art-historical grounds. In the case of Rogart, the earliest possible date for the manufacture of its Pictish penannular brooches (cat. no. 614; Wilson 1973, 81-2; Youngs 1991, cat. nos 111 & 112) provides a *terminus post quem* of the mid 8th century for the deposition of the strap-ends. The strap-ends from the Lilla Howe hoard, N. Yorks (cat. nos 293 & 417), meanwhile, were deposited with a number of gold ornaments including a pair of filigree roundels and several lost pieces of jewellery (Webster in Webster & Backhouse 1991, cat. no. 249) suggesting a late 9th- to 10th-century date for its deposition (ibid., 275).

Mention should also be made of two Class A strap-ends from a 9th-century female grave (Grave 1) at the Viking burial ground of Westness, Orkney (Graham-Campbell & Batey 1998, 136, fig. 7.11).

This evidence reinforces the general 9th-century dating given by the coin-hoards, though the earlier dates for Whithorn and Jarrow additionally support the hypothesis that Class A, in its many versions, was already fully developed well before the middle of the century. Unfortunately, due to the small sample and the absence of a representative range of types, this evidence does not elucidate any chronological patterns relating to an internal classification of the class.

6.4.3 Productive sites

Productive sites have contributed a large number of Class A strap-ends to the current survey, though this is to be expected since many such sites appear to have peaked in activity while this form of strap-end was in vogue. It is only on 'productive' sites such as Coddenham, Suffolk, and to a lesser extent Barham, Suffolk, where activity declines steeply during the latter half of the 8th century, that strap-ends are poorly represented at the expense of earlier metalwork, such as mounts and buckles (Webster pers. comm.; West 1998, 6-8, 20-24).

On the majority of 'productive' sites, including Royston, Herts, Bawsey, Norfolk, South Newbald and Cottam, N. Humb, with sustained activity into the 9th century, strap-ends are discovered in relative abundance. On some sites, a broad *terminus ante quem* for their manufacture is provided by a cessation in activity, as at South Newbald, where the lack of Anglo-Scandinavian metalwork and Anglo-Saxon or Viking coins later in date than the reign of Osberht (c. 848/9-67) suggests virtual or complete abandonment of the site following the Danish conquest of 867 (Leahy pers. comm.).

Unfortunately, due to the lack of archaeological context, these metalwork assemblages can usually offer no more than a general date range, exceptions being those sites which have undergone limited excavation. Cottam, N. Humb. has already been introduced in this respect, where it has been possible to define chronological differences in the distribution of Class A strap-ends (see above). Future discoveries from sites of this nature may aid in the construction of relative chronologies for strap-ends and other artefacts but cannot provide the absolute dates with which to pin them down.

6.4.4 Art-historical dating

Class A strap-ends are particularly receptive to this method of dating in view of the considerable range of decorative motifs and techniques which it embodies. This section examines in detail, from general to particular, the stylistic vocabulary of Class A strap-ends as a means of placing it firmly within an art-historical and chronological context.

a) General features

Before discussing the types of decoration used to provide an internal classification of the class, two features defined as representative are first considered. These are: i) a zoomorphic terminal; and ii) a foliate palmette (although such are, in fact, lacking from some examples).

i) Zoomorphic terminal

The most distinguishing feature of Class A strap-ends is the distinctive zoomorphic terminal. Although individually they display considerable variation in relation to quality and in some cases to regional fashions (see below & Chapter 7), all adhere to a basic stylistic formula consisting of an animal head seen from above with ears, eyes, brow and snout clearly depicted. Features may be incised in the flat or modelled in the round to give a highly naturalistic, three-dimensional effect. Elaborate examples are distinguished by the use of crisply executed facial features, with the use of inlays of niello, glass or enamel for eyes and additional decoration on the brow and snout. Conversely, poorly executed examples are characterised by highly stylised features, which in some cases display considerable standardisation. One such example uses rows of lunate incisions for the ears (e.g. cat. no. 648, Fig. 3.15B).

The range of animal heads represented on Class A strap-ends conforms to one of two regional types (see Chapter 7). The northern type is characterised by the use of curly comma-shaped ears, often in conjunction with bulging eyes (e.g. cat. no. 317, Fig. 3.4D), and the southern type is distinguished by oval or circular ears, with lunate incisions, often in association with inset eyes (e.g. cat. no. 421, Fig. 3.9A). Despite these differences the animal heads are closely related and, indeed, hybrid versions of the two exist (incorporating both forms of ear), not only within the corpus of strap-ends, but elsewhere in contemporary metalwork and sculpture, for example on the North Elmham censer cover (Webster in Webster & Backhouse 1991, cat. no. 206) and the sculptural fragment from Deerhurst church, Glos (ibid., fig. 27; and see below).

Tracing the origins of this particular motif is greatly aided by the recent work of Dominic Tweddle, who, in seeking stylistic comparisons for one of the heads on the helmet from Coppergate, York, carried out a comprehensive survey of the use of en-face animal heads in Anglo-Saxon and Insular art (1992, 1148-56). The wide scope of his comparative analysis encompassed Anglo-Saxon and Insular manuscripts, metalwork, including a number of Class A strap-ends, and sculpture ranging from the 7th to 9th centuries. While highlighting the general longevity and widespread use of this motif in both Anglo-Saxon and Insular art, the survey also drew attention to the positional contexts of the motif and its common use as a terminal of one variety or another.

Despite this general artistic tradition, however, the survey revealed a high degree of stylistic diversity on the heads of pre 9th-century date, both within and across media. Into the 9th century, however, not only does the popularity of animal heads on metalwork increase dramatically, but also the level of stylistic homogeneity, resulting in the familiar form synonymous with Class A strap-ends. As a result, Tweddle was able to contrast the general form characterising a range of 9th-century metalwork with that on the Coppergate helmet, stating: "the head on the helmet and those on

9th-century metalwork are so strikingly dissimilar that the helmet must be placed well before this series began, that is firmly before c. 800" (ibid., 1150).

The following comparisons serve to place the animal heads used on strap-ends firmly within a 9th-century context, although not denying the possibility of an 8th-century origin. The southern type appears on metalwork, including the seal-die from Eye, Suffolk, dated by inscription to c. 845-70 (Fig. 6.2A), the pommel of the Abingdon sword, dated on stylistic grounds to the last quarter of the 9th century (Fig. 6.2B; Hinton 1974, cat. no. 1), the Pakenham 'spur' (Fig. 6.2C; ibid., cat. no. 29), and several contemporary Trewhiddle-style hooked tags (Fig. 6.2D; Graham-Campbell 1982, fig. 2.2).

The northern type of animal head appears on the Strickland brooch, dated on stylistic grounds by Webster to the mid 9th century (Fig. 6.2E; Webster in Webster & Backhouse 1991, cat. no. 189); the secondary rim clamps on the Ormside bowl (Leeds 1911, 8-9; Webster in Webster & Backhouse 1991, cat. no. 134); the horn-mounts from the Trewhiddle hoard, deposited in c.868 (Fig. 6.2F); and the Alfred Jewel, which, if one accepts that its inscription refers to King Alfred, should be dated c. 871-99 (Fig. 6.2G; Hinton 1974, cat no. 23).

As alluded above, hybrid versions also exist in the form of the sculptural fragment from the church of Deerhurst, Glos, broadly dated to the 9th century (Fig. 6.2H; Tweddle in Webster & Backhouse 1991, fig. 27), and on the North Elmham censer cover, which was possibly lost or discarded before, or during, Danish incursions into East Anglia from the 840s onwards (Fig. 6.2I; Webster in Webster & Backhouse 1991, cat. no. 206).

It remains to comment on the occasional use of glass eye insets on the terminals of high-status strap-ends (e.g. cat. no. 534) The use of such inlaid settings on Anglo-Saxon metalwork for the eyes on animal heads was a long-lived tradition stretching back to the 7th century, as is attested, for example, by those of garnet on the boar of

the Benty Grange helmet (Webster in Webster & Backhouse 1991, cat. no. 46). It was only during the second half of the 8th century, however, that small glass settings gained in popularity, for eyes, on objects such as the St Ninian's Isle scabbard chapes (Webster 1991, cat. no. 178), an unprovenanced animal-headed pin (ibid., 1991, cat. no. 182), and the animal-headed mount from the River Thames (ibid., 1991, cat. no. 179), and on the Witham pins (ibid., cat. no. 184).

During the 9th century, the widespread, if occasional, use of glass inlays is evidenced by their occurrence on a range of metalwork, either for eyes, such as the 'spur' from Pakenham (Hinton 1974, cat. no. 29), the seal-die from Eye, Suffolk (Webster in Webster & Backhouse 1991, cat. no. 205), the Strickland brooch (ibid., cat. no. 189), and one of the brooch pairs from Pentney, Norfolk (ibid., cat. no. 187 c & d), or in other decorative contexts, such as the settings on the bezel of the ring from the Hoen hoard, Norway (Wamers 1986, cat. no. 128).

ii) Trilobate palmette

The origins of the distinctive trilobate foliate motif which is characteristic of the split-end of the majority of Class A strap-ends are more ambiguous than those of its zoomorphic counterpart. The use of foliate decoration is, in itself, an important chronological marker, however, for with the exception of vine- or plant-scroll, it does not make a general appearance on metalwork and other artistic media before the last quarter of the 8th century (Budny & Graham-Campbell 1981, 11). Thereafter, it was adopted with enthusiasm to become a regular stylistic component of 9th-century Trewhiddle-style metalwork. The trilobate palmettes which occur on strap-ends can be firmly placed within the repertoire of Trewhiddle-style foliate motifs as defined on a wide range of contemporary ornamental metalwork (see Graham-Campbell 1982, 146). Their leaves, characterised by a fleshy club-like form, are often provided with nicked contours, a stylistic trick previously highlighted as being a hallmark of the style (see Chapter 3).

The motif occurring on strap-ends is ultimately derived from the symmetrical 'bush-vines' (Bakka 1963, 9, 23) belonging to 8th-century objects, including the gilt disc-brooch from Pentney, Norfolk (Webster in Webster & Backhouse 1991, cat. no. 187f), the Witham pins (ibid., cat. no. 184) and a silver disc from Kaupang, Vestfold, Norway (Bakka 1963, 18, figs 14 & 16), though these are more naturalistic and are often accompanied by spiralling tendrils (ibid., 18, figs 19 & 20). A distinctive feature associated with some of these 8th-century bush-vines is the terminal of the stem, which often takes the form of a small club-like bud flanked by a pair of leaves with transverse mouldings (ibid., fig. 19). It is this element which Bakka suggests may be the inspiration for the bulbous trilobate leaves used on later 9th-century metalwork (ibid., 23), of which the palmettes discussed here are an example.

The change to the fleshier foliage, characteristic of Trewhiddle-style plant ornaments, is likely to reflect the early influence of contemporary Carolingian acanthus ornament, which was to have its most enduring impact on Winchester-style art - which developed out of Trewhiddle at the end of the century (Bakka 1963, 22). Wilson, for example, in tracing the origins of the style, drew parallels between Trewhiddle-style foliate motifs represented on objects such as the Poslingford ring and early 9th century Carolingian media, such as the capitals of the Soissons Gospels (Wilson 1975, 201, footnote 14).

6.4.5 Type A1 (Trewhiddle-style)

Of the class as a whole, Type A1 Trewhiddle-style strap-ends are most receptive to dating on two grounds: first, several have been discovered in coin-dated hoards (see above); and second, their decoration is representative of a mainstream artistic fashion which appears on a wide range of datable artefacts. Having already discussed the hoard evidence, it remains to present an overall chronology for the Trewhiddle style and the subsequent implications of this for dating Type A1 strap-ends.

Although the Trewhiddle style marks a distinct phase in the development of Anglo-Saxon art, because it is part of an artistic continuum (especially in regards to zoomorphic ornament), there are no rigid dating limits for its inception or termination. Thus, one can distinguish incipient or else residual Trewhiddle-style characteristics on artistic media belonging to artistic phases from which it evolves and subsequently develops (see Wilson in Wilson & Blunt 1961, 99-102). In the case of the former, several late 8th-century objects demonstrate the experimental use of stylistic traits which were to become widespread during the course of the 9th century. The speckling of decorative motifs, for example, can be traced back to such objects as the Fetter Lane sword hilt (Webster in Webster & Backhouse 1991, cat. no. 173), the silver-gilt finger-ring from the Thames at Chelsea (ibid., cat. no. 175) and the Witham pins (ibid., cat. no. 184). Meanwhile, the tendency to enclose individual motifs within small discrete fields is exhibited on the Anglo-Carolingian Tassilo Chalice dated by inscription to c. 777-88 (ibid., cat. no. 131).

Manuscripts are crucial for understanding and dating the early development of the style, especially its zoomorphic content. Although the close, stylistic relationship between the 'Tiberius' or 'Canterbury school' of manuscripts and Trewhiddle-style metalwork has been long and widely acknowledged (Brønsted 1924; Kendrick 1938a, 184; Wilson 1964a, 22-35; 1984, 94; Brown in Webster & Backhouse 1991, 195), the dating of the former has been contested by both palaeographers and art-historians alike until relatively recently (Wilson 1984, 96).

The situation is now much improved due to the efforts of Michelle Brown, who has identified close palaeographic links between a neglected member of this school, housed in the Bibliotèque Nationale, Paris (BN lat. 1086I), with a number of Christ Church, Canterbury, charters, dated to c. 805-25 (Brown 1996). The chronological implications of this discovery are that the clerical works attributed to the Canterbury scriptorium can now be more securely dated to the first quarter of the century (ibid., 136), and by extension, stylistically related metalwork also. Furthermore, this relationship is strengthened when considering the suggestion that the manuscripts

used as their exemplars metalwork belong to the same general dating horizon (Wilson 1964a, 25; 1984, 94).

An important chronological marker for the development of early Trewhiddle-style metalwork is the remarkable hoard of disc brooches from Pentney, Norfolk (Webster in Webster & Backhouse 1991, cat. no. 187). A dating in the first third of the 9th century is, in this case based not only on stylistic affinities between the animal ornament on the five larger brooches and manuscripts, such as the Royal MS I E.vi, and the Cotton Tiberius Bede (ibid., 230), but also on metallurgical analysis which indicates a silver content closely matched by that of contemporary coinage (Webster pers. comm.).

The importance of the hoard, quite apart from its regional affiliations (see Chapter 7), lies in its demonstration of the wide range of motifs which had developed earlier in the style's history (Wilson 1984, 96). Within its repertoire of zoomorphic ornament, for example, are certain beasts which hark back to the winged bipeds characteristic of 8th-century metalwork, and others with nicked contours and interlacing features that would not look out place on objects from the hoards deposited during the last third of the 9th century. Equally, there is a diverse repertoire of foliate forms represented, ranging from leaves used as appendages to animals and interlace, to elaborate speckled plants which occur independently on a wide range of Trewhiddle-style metalwork.

The next chronological markers are provided by Æthelwulf's ring (c. 839-58) and the complete strap-end from the Sevington hoard (c.850), which also serve to demonstrate that 'classic' Trewhiddle-style metalwork, as defined by Wilson (1961), was flourishing by the middle of the century (see Wilson 1964a, 26). Meanwhile, the relatively plentiful hoard evidence together with Queen Æthelswith's ring (c. 853-74), demonstrates that the second half of the 9th century sustained a continuing tradition in the style and its constituent motifs. It is only towards the end of the century, on specifically Alfredian products, that one witnesses the first significant

changes in the artistic repertoire of Trewhiddle-style metalwork. Such changes included the re-introduction and influence of Carolingian acanthus, represented on objects such as the Sittingbourne seax (Wilson 1964a, cat. no. 80) and the Abingdon sword (Hinton 1974, cat. no. 1), and also more complex imagery, exemplified by the Fuller brooch with its sophisticated iconographic rendering of the Five Senses (Webster in Webster & Backhouse 1991, cat. no. 257).

The question that must be asked is whether it is possible, in light of the outline chronology presented above, to date any Trewhiddle-style strap-ends more closely within the 9th century on art-historical grounds. Firstly, as Wilson points out, there is no ordered stylistic evolution during the course of the century marking a 'development of style and conquest of technique' (in Wilson & Blunt 1961, 108). It is increasingly apparent through new discoveries and study of neglected finds (Graham-Campbell 1982), that there is a large and ever increasing repertoire of motifs introduced into the stylistic vocabulary over a short period of time, but which were comparatively long-lived once in circulation. Thus, Wilson could only 'hazard a guess' that the mounts from the Trewhiddle hoard were produced during the first half of the century (1961, 108), not forgetting that his attribution was made when the deposition date for the hoard was c. 875.

Secondly, as apparent from a survey of the distribution of Type A1 strap-ends (Chapter 7), stylistic differences may be as much the result of regional fashions and localised manufacture as they are of temporal change, though the two are not necessarily mutually exclusive.

Thirdly, some of the Trewhiddle-style motifs represented on strap-ends are in some cases specific to this artefact type and thus difficult or impossible to parallel in more mainstream artistic media. Examples include the distinctive loop-eared animals belonging to Group A1a, vii, or the stylised designs characteristic of Groups A1a, xi and A1b, i. As a result of these factors, it would be unwise to date the majority of Trewhiddle-style strap-ends other than to within a century on art-historical grounds

alone. It is only in specific cases, where there are close enough associations between the ornament on strap-ends and well-dated objects, that such is possible.

Discussion will now focus on this limited material. A number of Type A1 strap-ends may be assigned a relatively 'early' date on the basis of close stylistic affinities with the Pentney hoard (Figs 6.3 & 6.4). Thus, an unprovenanced example in the B.M. (cat no. 391) has been attributed to the first third of the 9th century in light of the similarity of its 'winged beast' to those on one of the pairs of open-work brooches from the hoard (Fig. 6.3B). The silver and niello strap-end from St Paul-in-the-Bail, Lincoln (cat. no. 407), meanwhile, is decorated with a pair of nicked, 'bag-bellied' beasts closely matched by those on a singleton from the hoard (Fig 6.3A & C). Similarly, the speckled fruiting plants appearing on a number of Group A1a, xv strap-ends are close enough to those used on one of the brooch pairs to suggest they were manufactured about the same time, a proposition strengthened by their East Anglian distribution (Fig. 6.4; see Chapter 7).

Another stylistic trait that may potentially date the strap-ends is the use of paired confronted beasts developing into, and enmeshed by, interlace (see Group A1a, xiv). This motif characterises an 8th-century phase of Anglo-Saxon art - superseded during the 9th by the widespread use of designs in which the area of interlace was reduced and the animal bodies and interlace were rigidly separated (Budny & Graham-Campbell 1981, 13; Tweddle 1992, 1159-62). On this basis, strap-ends such as the example from Østebø, Norway, which was previously attributed an 8th-century date, (see Appendix 2; Bakka 1963, 40) may belong to a dating horizon encompassing the late 8th to early 9th century (Fig. 6.3D). Other strap-ends which could fit into this category include an example from Great Massingham, Norfolk (cat. no. 410, 3.7G), and an unprovenanced example in the B.M. (cat. no. 416, Fig. 3.8C).

Despite the above, other previous attempts to attribute strap-ends to the 8th century on the basis of their zoomorphic ornament, such as the fragmentary example from Walton, Bucks (cat. no. 187), should be treated with caution in light of the fact that

the diversity of motifs encapsulated within the Trewhiddle style has only until recently been fully appreciated (Graham-Campbell 1982, 150).

A group of strap-ends decorated by foliate motifs, may, by association with other locally manufactured artefacts, be dated to the close of the 9th century (Fig. 6.5). This includes examples from Chichester, W. Sussex, and Portchester, Hants, which are decorated with plants related to that depicted on the back of the Alfred jewel (Fig. 6.5B & C). On these examples, together with a hooked tag from the same Portchester site (Fig. 6.5D), moreover, this association extends to the sketchy manner in which the plants are incised on the surface of the metal (Hinton 1974, 47; Hinton & Welch 1976, 215-16; Hinton 1990, 500). The fleshy lobes, palmette leaves and characteristic 'cusped peltae' which characterise these plant motifs are in part influenced by Carolingian acanthus and are interpreted as stylistic traits associated with a Wessex workshop active during Alfred's reign (871-99) (see Webster in Webster & Backhouse 1991, cat. no. 260).

6.4.6 Type 2 (Geometric designs)

This type is provided with a general 9th-century date on archaeological grounds, examples having been discovered in secure archaeological contexts dated from the early 9th through to the early 10th centuries (see Appendix 3).

The simple, geometric designs which characterise the majority of Type A2 strap-ends are not receptive other than to more than a broad art-historical dating. Indeed, many of the more simple abstract designs cannot be paralleled outside the strap-end corpus. Despite this general statement, certain Sub-type A2b strap-ends, distinguished by step-and-roundel designs (e.g. cat. nos 613-16, Fig. 3.14D-F), have become a focus for advocating an 8th-century origin for the class as a whole and may well be early in the series (Evison 1976a; Graham-Campbell 1974, 234). This proposition is primarily based upon the similarity of these designs to the step-patterns used on a variety of 7th- and 8th-century media, including Anglo-Saxon cloisonné jewellery,

illuminated manuscripts and the decorative glass and enamel studs on Insular metalwork (Evison 1976a, 247-8).

In the case of the Rogart pair (cat. no. 614), a late 8th-century date is also plausible in light of the dating of the Pictish penannular brooches which were contained within the same hoard (see above and Graham-Campbell 1974, 234). The proposition that the type may belong early in the series finds additional support from the distributional evidence at the site of Cottam, Yorks, which indicated that their use was restricted to the earlier 8th/9th-century Anglian focus (see above).

6.4.7 Type 3 (Anthropomorphic)

The dating of Type A3 strap-ends rests upon the art-historical method, the examples from Cranbourne, Dorset, and Selsey, W. Sussex (cat. nos 727 & 731, Fig 3.16A & D), being most receptive to this form of analysis. The full-length, clothed male figures which characterise both strap-ends (see Chapter 3) find general parallels in various media dated to the closing quarter of the 9th century, including metalwork, such as the Abingdon sword (Hinton 1974, cat. no. 1), and the Fuller brooch (Webster in Webster & Backhouse 1991, cat. no. 257), and on sculpture in the form of a cross-shaft from Codford St Peter, Wilts (ibid., cat. no. 208; for manuscript parallels see Bruce-Mitford 1956, 182-3; Hinton 1975b, 37-8).

The Dorset example has a distinctive iconographic composition of an animated figure entwined and/or grasping a fruiting plant-stem, which is closely matched by the designs on the Codford cross-shaft, and the Abingdon sword, not forgetting that the central figures on both the Fuller brooch and the Alfred Jewel are also portrayed clutching foliate sprigs. The four seated figures on the lost Selsey strap-end are more difficult to parallel, in part due to the quality of the surviving photographs (see Hinton 1981). However, the use of a seated figure in association with a stool (seen most clearly in the top left-hand panel) is paralleled on the Alfred Jewel (Hinton 1974, 33).

Most of the comparanda cited are dated to the last quarter of the 9th century, though that of the Codford carving has been much contested, with published estimates ranging from the late 8th (Tweddle in Webster & Backhouse 1991, cat. no. 208) through to the mid 9th century (Kendrick 1938a, 179) and 10th centuries (Wilson 1984, 195-6). Considering the location of the strap-end's findspots (see Chapter 7) and the limited use of such complex renderings on metalwork, there seems every reason to attribute them to the same temporal artistic tradition responsible for more ambitious products such as the Alfred jewel, the Abingdon sword and the Fuller brooch (see Webster in Webster & Backhouse 1991, 268).

The naked figures with upraised arms seen on strap-ends from Cheriton, Hants, Brandon, Suffolk, and York, (cat. nos 727, 730 & 732, Fig. 3.16C & E), belong to a more enigmatic artistic tradition that is likely to have been purely secular in inspiration. Parallels for such designs are thus generally lacking in more mainstream artistic media, such as sculpture and manuscripts, though Webster draws a parallel between the Brandon figure and a naked male grotesque used in the late 8th-century Barberini Gospels (Webster in Webster & Backhouse 1991, cat. no. 66l). As a consequence, these examples can only be dated broadly to the 9th century on the basis of their morphology and, in the case of the York strap-end, its Trewhiddle-style features - including the beasts flanking the central figure and the speckling of its individual motifs. Of importance is the continued use of this motif into the 10th and possibly 11th centuries (see E2a, i), a period for which there is increasing evidence of a secular tradition representing the human form on metalwork (see below).

6.4.8 Type 4 (enamel)

The lack of enamel strap-ends from securely stratified archaeological contexts (see Appendix 3), combined with the nature of their abstract designs, precludes a dating other than to within the 9th century.

6.4.9 Type 5 (Silver-wire)

Of the eleven silver-wire strap-ends discovered on archaeological excavations (see Appendix 3), three come from contexts securely dated within the 9th century. Examples from Brandon and Ipswich, Suffolk (cat. nos 841 & 845), were recovered from pits with pottery assemblages indicating a mid to late 9th- and late 9th- to early 10th-century date respectively. The Repton, Derbs, strap-end (cat. no. 813), as mentioned at the beginning of the section, is provided with a *terminus ante quem* of 873-4 on the basis of its discovery in one of the primary make-up layers of the Viking burial mound (Thomas 1996, 85). A broad 9th-century dating is also supported by their discovery on 'productive' sites such as Bawsey, Norfolk, Barham, Suffolk and Cottam, Yorks (see Chapter 8).

A comparative art-historical survey of their distinctive decoration has failed to refine this 9th-century dating based upon the above evidence and their general morphology (Thomas 1996). This is largely due to the fact that their scrollwork designs are insufficiently diagnostic in art-historical terms, appearing on media belonging to a wide chronological and geographical range. To a lesser extent, this is also true of their decorative technique, Insular artefacts dating from the 8th to 9th centuries providing the closest technical parallels (ibid., 86-7).

6.5 The dating of Class B strap-ends

A discussion of the dating of Class B strap-ends has immediately to progress to the dating of individual types since their varied chronologies negate a general introduction.

Examples representing the simplest manifestation of Class B, characterised by transverse banded decoration, have been discovered in securely stratified archaeological contexts indicating a broad dating horizon potentially spanning the mid 8th to the 11th centuries (see Appendix 3). The examples from Middle Saxon

contexts at Hamwic (cat. nos 888-90) and from the Peabody site, London (cat. no. 943), certainly suggest that the origins of the type may, like those of Class A strap-ends, lie in the 8th century. Their production and usage during the 9th century is also widely attested on archaeological grounds. The example from Thwing, N. Humb (cat. no. 910), was discovered in association with a coin of the Northumbrian king Eanred (c. 808-41) (Manby pers. comm.). That from the site of Whithorn, Dumfries & Galloway, Scotland (cat. no. 881), came from a context also containing coins which suggests a deposition date in the 840's (Nicholson & Hill 1997, 373). Meanwhile, their sustained usage into the 10th and 11th centuries is indicated by their discovery in contemporary contexts from Winchester (cat. no. 894) and Westminster Abbey, London (cat. no. 944).

6.5.1 Type 1 (Trewhiddle style)

One Trewhiddle-style Class B strap-end from Hinxton Hall, Cambs (cat. no. 974), has been discovered in a securely stratified archaeological deposit broadly dated to c. 875-1000 (see Appendix 3). The remainder can be ascribed a general 9th-century date on the basis of art-historical analysis (see above). The existence of the type is itself convincing confirming evidence for the use of the characteristic form of Class B strap-ends during the 9th century.

6.5.2 Type 2 (Silver-wire)

No members of the type have, to date, been recovered on archaeological excavations, though the fact that they clearly belong to the same metalworking tradition as Type A5 strap-ends indicates that they were also current during the 9th century.

6.5.3 Type 3 (Elaborate shafts)

Due to the lack of excavated examples and their lack of diagnostic decoration, the type can only be attributed a general late 8th- to 11th-century dating horizon by comparison of their general form with better dated Class B strap-ends.

6.5.4 Type 4 (Multi-headed)

Of the seven Type B4 strap-ends discovered on excavations, those from Whithorn, Dumfries & Galloway, Birsay, Orkney, and Carlisle, Cumbris, are the best dated (see Appendix 3, cat. nos 1015-18). The first was recovered from a rubbish deposit dated to the 840's by associated numismatic evidence, the second from an occupation deposit associated with the 'Middle Norse horizon' broadly dated from the late 9th to the second half of the 10th centuries (Curle 1982, 17), and the third from a disturbed grave associated with a cemetery dated on the basis of associated finds to the late 9th to 10th centuries (Tweddle pers. comm.).

The type is otherwise dated to a similar period on art-historical grounds. The distinctive muzzled animal heads with rounded bear-like ears which characterise the type have their closest parallels in Viking art and on artefacts discovered on Viking-age settlements in Scandinavia, Britain and Ireland. This includes a Type B5 strap-end from Coppergate, York, discovered from a late 10th-century context (see below, cat. no. 1034) and a hybrid Class E strap-end from Aggersborg, Denmark (Fig. 6.6A). More generally, such heads are used extensively on artefacts attributed to the Borre-style, a Viking art-style dated independently to the second half of the 9th to the second half of the 10th centuries (see Wilson & Klindt-Jensen 1966, 87-95; Graham-Campbell 1980, 139; c.f. p. 40 below). The characteristic sub-triangular heads appear on a wide variety of Borre-style objects ranging from oval and trefoil brooches (Graham-Campbell 1980, cat. nos 123 & 128), to pendants (ibid., cat. no. 163) as well as on the strap-ends from the Borre find itself (Fig. 6.6B).

6.5.5 Type B5 (Interlace)

Three of the four Type B5 strap-ends derive from archaeological contexts that are useful for dating purposes (see Appendix 3). The Ipswich strap-end was discovered in a late 9th-century context (cat. no. 1031, Fig. 3.21G), while the two examples from Coppergate, York, came from deposits dated to the late 10th century (cat. nos 1033-4, Fig. 3.21H & I).

The design of one the Coppergate examples may be dated on art-historical grounds to the 10th century on the basis of its Borre-style ring-knot see below (Richardson 1991, 178-9). The simple interlace designs which appear on the other members of the type are more difficult to date on such grounds, although the form of the closely-knit, plump, interlacing strands may be compared to those on such Viking-age sculpture as the Gosforth cross (Bailey 1980, fig. 23) and other Anglo-Scandinavian artefacts, including the Aggersborg strap-end (Fig. 6.6A).

6.5.6 Type 6 (Profiled heads)

Unfortunately, the only example of a Type B6 strap-end recovered archaeologically comes from an unstratified deposit (cat. no. 1039, Appendix 3). Dating is thus dependent upon an art-historical appraisal of their distinctive animal heads. The crisply executed example on the unstratified Winchester strap-end clearly belongs to a general type used on artefacts attributed to the Ringerike and Urnes styles of Viking art, current in England during the first and the second half of the 11th century respectively (Fuglesang 1980, see below, Class G). The diagnostic almond-shaped eyes and interlacing mouth-lappets which distinguish the head-type appear on a wide range of artistic media from both Scandinavia and England, the majority of which are catalogued in Fuglesang's survey Some Aspects of the Ringerike Style (e.g. cat. nos 42, 43, 50, 79 & 88, though see Graham-Campbell (1980, cat. nos 501 & 503) for classic Scandinavian Urnes-style examples).

A useful comparanda for the more stylised heads which characterise several Type B6 strap-ends is provided by Williams's recent catalogue of stirrup-strap mounts (1998). Such heads are widespread among his corpus, appearing on mounts belonging to all three of his main morphological classes (ibid., fig. 6).

A further illustration of the popularity of this motif on metalwork reflecting an English version of the Ringerike style is provided by a series of zoomorphic buckles. These are characterised by frames depicting a pair of these profiled animal heads biting a cross-bar which is decorated with a union-knot motif (Fuglesang 1980, cat. no. 48; Thomas, forthcoming).

In the case of the strap-ends, however, a more refined attribution to within the 11th century is hampered by the fact that their attribution is based on recognition of the head-type only. A more diagnostic range of stylistic motifs would have to be present in order to assign them to one of the two art-styles with which it is associated, and by extension to either the first or second half of the century.

6.5.7 Type 7 (Hooked)

The only excavated example of a hooked Class B strap-end, from Rottingdean, W. Sussex (cat. no. 1043), is derived from a Norman period context dated by associated pottery providing a *terminus ante quem* of c.1150 (Appendix 3). The similarity of its overall form and incised decoration to Class B strap-ends from Winchester, dated to the 10th and 11th centuries (see above), provides a strong case for the continued use of these simple types beyond the conquest. Another possible example from Hamwic, catalogued as a hooked tag and therefore not included in the present survey, was recovered from a context dated to c. 850-900 (Hinton 1995, 11).

Because of their lack of diagnostic decoration, the remaining metal-detected examples can only be provided with a broad date range of c.750-1100 based upon the

archaeological evidence and their similarity to Class B strap-ends carrying transverse incisions or mouldings on their shafts.

6.6 The dating of Class C strap-ends

For the dating of Class C strap-ends, one is reliant on archaeological discoveries since their simple form and decoration is unreceptive to art-historical analysis. Fortunately, several have been discovered from well-dated archaeological contexts indicating a period of usage spanning the mid 7th to 9th centuries. Particularly interesting in light of the dating of the classes discussed thus far are the number of Class C strap-ends from contexts potentially dated to the 8th century or earlier. This includes an example from a mid-7th-century context at the monastic site of Hartlepool (cat. no. 1050), and others from 8th-century contexts at the Royal Opera House, London (cat. no. 1062), and Hamwic (e.g. cat. nos 1055-6) (see Appendix 3). This 'early' dating is also supported by the fact that none have been discovered on settlement sites with evidence for sustained occupation into the Later Saxon period (late 9th-11th centuries). On the basis of this evidence, Class C strap-ends provide one of the clearest indications for continuity of use from the Mid through to the Late Saxon periods.

6.7 The dating of Class D strap-ends

The three Class D strap-ends discovered from archaeological contexts suggest a wide 8th- to 10th-century date bracket for the class (cat. nos 1072-3 & 1076, Appendix 3). This is supported by art-historical dating in the case of an example from Scopwick, Lincs (cat. no. 1077), with gilt chip-carved decoration which is commensurate with an 8th-century attribution (Wilson 1964a, 9-21) and another from Stallingborough, Lincs (cat. no. 1074), with an animal-head terminal comparable to 9th-century Class A strap-ends.

6.8 The dating of Class E strap-ends

The dating of characteristic tongue-shaped Class E strap-ends to the 10th and 11th centuries rests primarily on archaeological and art-historical grounds, as only a single example comes from a coin-dated hoard (see below). This attribution is also suggested by negative evidence, none occurring in 9th-century coin-dated hoards or on sites such as Hamwic or Whitby, N. Yorks, where occupation is thought to have contracted or else ceased completely during the 9th century (Hinton 1996, 96; Wilson 1964a, 8). The same is true of 'productive' sites such as Barham, Suffolk, and Royston, Herts (Webster pers. comm.). Conversely, they are often represented on both archaeological or 'productive' sites, such as Winchester and Bawsey, Norfolk, where occupation is either restricted to, or else continues into, the Late Saxon period.

The fact that the Class also represents the adoption of what is essentially a Carolingian form is also commensurate with a late 9th-century dating for their origins in England. This is a period for which there is increasing evidence for cultural links with Carolingian Europe initiated by the Alfredian reform movement during the last quarter of the 9th century (Backhouse et al. 1984, 18-19).

6.8.1 Type 1 (Winchester style)

a) Coin hoards

The only coin-dated hoard containing a Class E strap-end is from Äspinge, Skåne, Sweden (see Table 6.1), which provides a *terminus ante quem* of c.1047. This example is decorated with a cat-like animal from whose mouth issues a foliate spray in the manner of the animal masks which appear on several contemporary Winchester-style manuscripts dated the late 10th to 11th centuries (see below & Backhouse et al. 1984, 129). The general form of the animal can be paralleled on Winchester-style metalwork, including the London Bridge censer cover (Wilson 1964, cat. no. 44), and bone/ivory artefacts such as the strap-end from Leicester (cat.

no. 1125, Fig. 3.24C) and an unprovenanced comb (Wilson 1960). These parallels suggest a late 10th- to 11th-century date for the manufacture of this strap-end (see below).

b) Archaeological finds (Appendix 3)

Several Winchester-style strap-ends have been discovered in securely stratified archaeological contexts, also indicating a period of usage spanning the 10th and 11th centuries (see Appendix 3).

Of central importance for the dating of the type are the three examples from Winchester which illustrate a progressive stylisation, from crisply executed inhabited plant-stem designs to more abstract acanthus decoration, during the course of the second half of the 10th and 11th centuries - a development repeated elsewhere in the undated corpus (cat. nos 1122, 1142 & 1147; see below & Hinton 1990, 496-7). The late 10th-century context associated with a very stylised E1c example from the Lloyd's Bank site in York (cat. no. 1199), would appear to corroborate this chronological sequence.

Examples decorated with stylised foliate designs belonging to Sub-type E1c are, by association, more likely to have been manufactured towards the end of the 10th and during the 11th century.

c) Art-historical dating

Type E1 strap-ends are particularly receptive to art-historical dating since they are representative of a relatively well-understood phase of Anglo-Saxon art, the Winchester style. There are several manuscripts and artefacts attributable to the style which provide absolute dates for a constructing a chronology for southern English art during the 10th and 11th centuries (see Wilson 1964a, 35-51; 1984, 154-79). This material encompasses the range of dating criteria set out by Wilson, from inscriptions

relating to known historic individuals, as in the case of those on St Cuthbert's stole and maniple (Wilson 1984, 154, fig. 190), through objects discovered in coin-dated hoards, including the aforementioned example from Sweden, to objects imitating coins, such as Aelfric's seal dated to c.978/9 (Wilson 1964a, cat. no. 104). Archaeological discoveries have augmented the corpus of datable Winchester-style material, those from Winchester itself, including a re-used wall-painting fragment with a *terminus ante quem* of c.903 being the most notable (Wilson 1984, 155, fig. 204; see also Hinton 1996b, for up to date list).

The majority of artefacts dated art-historically are done so by comparison with the relatively well-dated series of illuminated manuscripts produced in southern English scriptoria from the first half of the 10th century, the most celebrated and productive of which were associated with the See of Winchester. To exemplify such comparisons, discussion will turn to the dating of the finest of the Winchester tongue-shaped strap-ends (cat no. 1122, Fig. 3.24A).

Wilson originally dated this strap-end to c. 1000 on the basis of its acanthus ornament, comparing its 'free voluted terminals' to those on the New Minster Charter (1969, 328). He later revised the dating of the strap-end to the first half of the 10th century, however, on the basis of its attribution to a group of artefacts characterised by their 'chunky style' (Wilson 1984, 160), including the Canterbury and London censer covers (ibid., figs 208 & 209), and the small gilt copper-alloy jug first identified by Kendrick (1938b). This group of material has closer affinities to Winchester-style manuscripts dated early on in the sequence including the Corpus Christi Bede (Wilson 1984, 156, fig. 203) the Bodleian Library Junius 27 (ibid., 157, figs. 195 & 196) and the Bodleian Library Tanner 10 (ibid., 157, figs. 212-15). This revised dating is also in agreement with that given for its archaeological context and an early to mid 10th-century attribution is followed by more recent commentators (Backhouse et al. 1984, cat. no. 83; Wamers 1986, 33; Hinton 1990, 495).

Several Winchester-style strap-ends, characterised by designs consisting of paired birds and other animals perched on balanced vine-stems, clearly belong to the same stylistic horizon (Sub-type E1a, Figs 3.24 & 3.25), so may be broadly dated to the first half of the 10th century (see Kendrick 1938b; Wilson 1975, 202-3; Wamers 1986, 22-41). The conspicuous presence of these strap-ends amongst this material has important implications for understanding the genesis of the Winchester style in England, for they represent a likely medium for the original introduction of Continental Carolingian motifs into the repertoire of Anglo-Saxon art.

Pivotal to this suggestion is the recent research of Egon Wamers which reaffirms that the origins of the style were firmly rooted in the workshops and scriptoria of 9th-century Carolingian Europe (1986, 36-42; 1987). Although the influence of Carolingian manuscripts and ivory carving on Winchester-style art has long been acknowledged (see Wamers 1987, 107), it is only recently, that the additional importance of Carolingian metalworking has also come been appreciated (cf. Hinton 1996b).

Amongst the material highlighted by Wamers are several objects, most notably an unfinished copper-alloy mount from Mainz, which are closely related to Winchester-style strap-ends in their use of balanced inhabited vine-scroll decoration (Wamers 1986, 22-43). Although no Carolingian strap-ends carrying such ornament have yet been discovered, several 9th-century examples are known with plant motifs which clearly inspired the designs on Anglo-Saxon metalwork, particularly strap-ends (Fig. 6.7 B-D, see below, Type E6).

It is clear from this evidence, and the obvious influence of Carolingian strap-ends on the morphology of Anglo-Saxon Winchester-style versions, that this artefact type played an important role in introducing new Continental motifs into the stylistic repertoire of Anglo-Saxon art during the first half of the 10th century. A corollary to this proposition is that within England, such artefacts are likely to have been

particularly formative during the style's early stages of development - a suggestion recently voiced by other scholars (see Hinton 1996b, 215).

6.8.2 Type 2 (Anthropomorhic)

Three examples of tongue-shaped strap-ends decorated with anthropomorphic representations have been discovered from stratified archaeological contexts (cat. nos 1201, 1204 & 1216, Appendix 3). All three depict a naked human figure with upraised arms, though they are executed in different techniques. The examples from Norwich and Wellington Row, York, from contexts dated to the 11th and the 8th to 11th centuries respectively, are decorated in relief and thus belong to Group E2a, i. The third example, from Ipswich, discovered in a 10th-century context, has an openwork design characteristic of Group E2b, i.

The origins of this motif can be traced back to the 9th century on Class A strap-ends (see Type A3) so that its presence on strap-ends dated on archaeological and morphological grounds to the 10th century suggests it remained fashionable for a comparatively long period.

The remaining Type E2 strap-ends, including those belonging to Groups E2b,ii and iii, can only be broadly assigned to the 10th and 11th centuries on art-historical grounds. The motifs which characterise these examples, consisting of human figures depicted in association with sinuous beasts or interlace, find their closest parallels on stirrup-strap mounts stylistically dated to the 11th century (see Williams 1997, Class A, Type 3). Together, these artefacts demonstrate metalworkers' increasing experimentation with human representations during the Late Saxon period (Chapter 2).

6.8.3 Type 3 (Ribbed)

Ribbed strap-ends are reasonably well dated to the period spanning the late 9th to 10th centuries on the basis of their discovery in Viking graves from the Isle of Man and Carlisle (cat. nos 1226-48, Appendix 3). Examples have also been discovered in Vendel to Viking-age and Middle Viking period graves in mainland Scandinavia (see Graham-Campbell, forthcoming) and the trading settlement of Domburg in Holland thought to have been active from the 7th to 9th centuries (Fig. 6.7A, see Hodges 1982, 74).

Although their decoration is not particularly receptive to art-historical dating, the association of punched ring-and-dot decoration with their tongue-shaped form also supports a 10th-century attribution. A Type E4 strap-end from St Mary Bishophill Senior, York (see below), for example, dated to the 10th century on account of its Borre-style decoration, also carries a punched ring-and-dot design on its reverse (Wilson 1965b).

The fact that the excavated examples of this type have been discovered in association with matching buckles, is also of chronological significance (see Chapter 8). On this basis, they may be compared to other belt-suites and spur-fittings of similar dimensions and morphology dated to the 9th and 10th centuries. This includes the plain silver pair from the Trewhiddle hoard (cat. no. 1366), and the pair of 9th-century Carolingian examples from the Viking grave at Balladoole on the Isle of Man (cat. no. 1280, Fig. 3.30D).

6.8.4 Type 4 (Borre-style)

The two Borre-style, tongue-shaped strap-ends discovered archaeologically, from Workington, Cumbria, and St Mary Bishopshill Senior, York (cat. nos 1248 & 1257, Appendix 3), can be broadly dated to the late 9th to 10th centuries on account of their discovery in Viking graves (Mc Carthy, pers. comm; Hall 1998, 61).

The remainder of this type can be dated on art-historical grounds to a period spanning the late 9th to 10th centuries on the basis that their decoration, which is either representative of, or else heavily influenced by, the Borre style of Viking art (Wilson & Klindt-Jensen 1966, 87-95; Richardson 1993). Primarily due to its occurrence on objects contained within coin-dated hoards and other closed contexts such as graves, the style is estimated to have been current in Scandinavia from the second half of the 9th to the second half of the 10th century (Wilson & Klindt-Jensen 1966, 87-95; Graham-Campbell 1980, 139). In Scandinavia, the style appears on a wide range of objects and media, including strap-ends (Fig. 6.6C-E).

The Borre style was the most influential of all the Viking art-styles introduced to the British Isles, primarily as a result of the fact that its period of currency in Scandinavia coincided with the most intensive phase of Viking settlement. As a result, the style is represented on a range of artistic media, some of which may be dated by means other than art-historical means. Several Borre-style artefacts have been recovered from 10th-century levels at various sites in Britain and Ireland, those from Dublin and York being the most notable (see Richardson 1993, Chapters 4 & 7).

6.8.5 Type 5 (Other Scandinavian designs)

The only well-dated Type 5 strap-end is the silver-gilt example from the Cathedral Green excavations, Winchester, discovered in a context associated with the robbing of the Old Minster, dated to c. 1093-4 (cat. no. 1258, Fig. 3.30A). Its decoration, based on a Viking Jellinge-style motif, described by Wilson 'as the nearest approach by an English artist to the true Scandinavian style' (1975, 206), suggests a 10th-century date of manufacture.

In light of the fact that the strap-ends of Type 5 constitute a stylistically heterogeneous group, their dating on art-historical grounds is somewhat arbitrary. Having said this, the majority are decorated with stylised renditions of motifs

inspired by Late Viking art-styles, the Urnes style in particular. On this basis, the majority should be broadly dated to the 11th century, as discussed elsewhere in this chapter.

6.8.6 Type 6 (Carolingian)

Examples of Carolingian tongue-shaped strap-ends discovered archaeologically are all from Viking burials and thus dated by associated grave-goods (cat nos 1275-95, Appendix 3). Of these, the most receptive to dating is the boat-burial from Balladoole on the Isle of Man which Wilson attributes to between c. 850 and 950 (Bersu & Wilson 1966, 87) and Graham-Campbell to c. 900 to 950 (Graham-Campbell 1995b, 75-8).

The remainder of the group can be assigned to a similar period on art-historical grounds, especially by comparison with Carolingian strap-ends and belt-fittings contained within Viking hoards and burials in Scandinavia (see Fraenkel-Schoorl 1978; Wamers 1986; Graham-Campbell 1980, cat. no. 327). The distinctive foliate decoration which characterises this material, especially strap-ends such as those illustrated in Figure 6.7, is dated to the second half of the 9th century by comparison with contemporary Carolingian artistic media, especially illuminated manuscripts (Fraenkel-Schoorl 1978).

6.8.7 Type 7 (Unclassified)

The idiosyncratic or else unidentified decoration belonging to the majority of unclassified Class E strap-ends prevents an accurate dating. The likely Zodiac imagery belonging to the open-work strap-end from Hindolveston, Norfolk (cat. no. 1299, Fig. 3.31B), however, is specific to post-conquest Romanesque art (see Zarnecki et al. 1984, cat. nos 23,. 34), an observation suggesting that the tongue-shaped form characterising the Class outlived the Norman conquest.

6.9 The dating of Class F strap-ends

Two Insular Class F strap-ends discovered within the survey area are derived from stratified archaeological deposits (cat. nos 1302 & 1306, Appendix 3). This includes an example from the Udal, North Uist, discovered in a 9th- to 11th-century context, and an additional find from the Viking burial at Cronk Moar, Jurby, on the Isle of Man which Graham-Campbell dates to the first half of the 10th century (Graham-Campbell 1995b, 75-8). Outside the survey area, however, three further examples have been recovered from 10th-century occupation deposits encountered during excavations in Dublin (see Lang 1988, 95, fig. 118; Richardson 1993, 152-57).

This reasonably secure late 9th- to 10th-century attribution based upon archaeological evidence is supported by stylistic dating. Two of the Dublin finds, as well as examples from the Udal and Colonsay, are decorated with Borre-style interlace motifs dating them to the period from the second half of the 9th to the second half of the 10th century (see above). In the case of the Udal specimen, Graham-Campbell proposed a more refined attribution of 'not much later than c.900'on the basis of its suggested 9th-century Insular origin and close stylistic links with other 9th-century Insular artefacts, such as a group of bridle-mounts (1973, 130-1).

More recently, in the discussion of a buckle from the monastic site of Whithorn, Dumfries & Galloway, an ever tighter date range of c. 890-930 was suggested for its manufacture and that of the strap-ends and bridle-mounts to which it is undoubtedly related (Nicholson 1997, 623). In this instance, the attribution was primarily based upon a refined chronology for the Viking-age ring-headed pins often discovered in association with this material, including that from the same grave as the Cronk Moar strap-end (ibid., 623).

On the basis of this evidence, the majority of examples discovered within the Danelaw should be assigned to a similar or slightly later period, in light of the

suggestion that some may represent copies manufactured locally within Eastern England (e.g. cat. no. 1310, see Chapter 7).

6.10 The dating of Class G (Urnes-style) strap-ends

Unfortunately, neither of the two Class G strap-ends discovered on archaeological excavations is from a primary context, though the example from Doncaster was discovered in a medieval feature adjacent to a pre-Conquest ditch (cat. nos 1314 & 1323, see Appendix 3). The class must therefore be dated on art-historical grounds. The close morphological and stylistic parallels provided by similar strap-ends from Gotlandic and Swedish graves strongly suggest that this distinctive form originated in Eastern Scandinavia during the 11th century (Fig. 6.6F).

More generally, the series may be dated on the basis of their distinctive interlacing tongues which represent a manifestation of the Urnes style of Viking art (as Wilson & Klindt-Jensen 1966, 147-60; Owen 1979). This style is thought to have been current in Scandinavia, primarily on the basis of coin-dated and rune-stone evidence, from the second quarter of the 11th to the first quarter of the 12th century, with its flourit in the second half of the 11th (Owen 1979, 71).

Owen dates its period of currency in Britain and Ireland from the mid 11th to the second quarter of the 12th century, although in England its influence beyond the close of the 11th appears to have been restricted to stone sculpture (ibid., 174). The strap-ends are thus likely to have been manufactured at some time during the second half of the 11th century, along with other metalwork representing a distinctly English version of the Urnes style (e.g. Owen & Trett 1980, 353-4; Williams 1997).

6.11 The dating of Class H strap-ends

In view of the heterogeneous nature of this class, the dating of its individual members was considered in Chapter Three. More extended discussion on the

chronologies of the Viking art-styles associated with these strap-ends is given elsewhere in this chapter.

6.12 The dating of Class I strap-ends

Due to a lack of excavated or other archaeological finds, the dating of Class I composite strap-ends is wholly dependent on art-historical analysis. Their profiled animal heads are their most diagnostic feature being stylised renditions of the open-jawed heads used on Type B6 (see Fig. 3.32H & I). This similarity invites wider comparisons with the heads used on Ringerike and Urnes-style media from both Scandinavia and England (see above). Considering their very debased features, it is probable that these strap-ends were manufactured towards the end of these styles' currency in England, presumably during the second half of the 11th century.

A late date is also supported by their unique composite form, representing a technological departure from the usual one-piece design characteristic of the great majority of strap-ends reviewed in this survey. In light of this observation, the existence of later medieval strap-ends of similar dimensions, and of the same design, incorporating a cast front-plate and sheet back-plate, suggests that the class was influential in the subsequent development of this artefact type (e.g. Egan & Pritchard 1991, cat. no. 614, fig. 86).

6.13 The dating of Class J strap-ends

The most securely dated folded-sheet strap-end is that with a circular attachment-end (Type J1) which forms part from the coin-hoard deposited in c.875 at Beeston Tor, Staffs (cat. no .1343, Table 6.1).

Several Class J strap-ends have been discovered in stratified archaeological contexts (cat nos 1345-62, Appendix 3), though this was highlighted as a necessary pre-requisite for their inclusion in the survey on account of the fact that their simple form

continued to be used into the later medieval period (see Chapter 3). Of these, Type J1 strap-ends have been discovered in contexts variously dated from the mid-9th to the late 11th centuries, and the cruder rectangular type (J2), from 7th- to 11th-century levels. This evidence supports the suggestion that the class, in general, had a long period of usage, though the more elaborate J1 variety is likely to represent a specific Late Saxon form.

6.14 The dating of Class K strap-ends

One of the three Class K animal-headed strap-ends was recovered from an archaeological deposit, dated c.950-1150 (cat. no. 1364, Appendix 3). It is likely, however, that this context is secondary, given the similarity of the animal head to those used on 9th century Class A strap-ends (see above). The remaining two examples may also be dated to the 9th century on this basis.

6.15 The dating of Class L (Unclassified) strap-ends

Of the fourteen unclassified strap-ends, the plain silver pair from the Trewhiddle hoard (cat. no. 1366) are the best dated. Ten further examples have been discovered from archaeological contexts (Appendix 3). These range from the mid 8th to the 13th century in date, though the strap-end associated with the latest of these, (cat. no. 1377), is clearly residual on account of its zoomorphic terminal,which is readily paralleled by 9th-century strap-ends (Fig. 3.34H). The likely 'early' date of the strap-ends from Canterbury, Ipswich and Jarrow (cat. nos 1368, 1370-1, Fig. 3.34A, C & D) was discussed earlier in the chapter.

6.16 Summary and conclusions

From an evaluation of the available dating evidence, it has been possible to construct a general outline chronology for the development of strap-end usage throughout the Anglo-Saxon period. Within this framework, one is able to trace the periods of

currency of the majority of classes reviewed in the survey with a reasonable degree of accuracy and confidence (Diagram 6.1).

As a dress-accessory, the strap-end had a long period of usage stretching at least as far back as the Late Roman period. During the Early to Middle Saxon periods, a variety of types were in existence (5th to 8th centuries), the majority of which were influenced by continental, Frankish fashions. There is limited evidence of the continued use of one of these varieties, the so-called 'Bayleaf-type' strap-end, into the Middle Saxon period. Also during this era one witnesses the limited introduction of, on *wic* sites such as Hamwic and Lundenwic, the thin Class C strap-ends which continued to be manufactured into the 9th century. Class J, (folded-sheet strap-ends) are also attested in the 7th and 8th centuries, as they are for the entire duration of the period covered by the survey.

The 8th century is somewhat of an enigma regarding strap-end usage, primarily due to a dearth of dating criteria, though it is likely that its last quarter marked the introduction of Classes A, B and D. The widespread use of Class A strap-ends during the course of the 9th century reflects a peak in popularity of this artefact type during the Anglo-Saxon period, when other classes also competed for the market, including B, C, D and K.

Class E (tongue-shaped) strap-ends had generally replaced Class A strap-ends by the beginning of the 10th century, the exception being the north of the country, where the two varieties may have co-existed for a short period. Carolingian Type E6 strap-ends represent one of the earliest manifestations of the class, some being the imported continental prototypes on which the Anglo-Saxon series was ultimately based. Tongue-shaped strap-ends remained the dominant form for two centuries developing into a range of decorative varieties, the most widespread and enduring being that distinguished by Winchester-style ornament. This form of strap-end was also one of the first to be affected by Viking art-styles, as attested by Types E4 and E5, though similar influences are also apparent on Insular Class F strap-ends which were

introduced into England via Viking colonial activity in the last quarter of the 9th century.

Class B strap-ends were also popular during the 10th century, by which time the general form had proliferated into a number of decorative types, including those also influenced by Viking tastes (Types B4 and B5). Despite these new developments, the long-established variety characterised by simple, incised decoration continued to be manufactured in urban centres such as Winchester and Canterbury well into the next century.

The second half of the 11th century witnessed the introduction of new types of strap-end, including the distinctive Urnes-style variety with openwork tongues (Class G) and Class I composite strap-ends. The similarity of the latter to some later medieval strap-ends indicates that their design was influential after the Norman Conquest.

Despite this overall picture, the comparative lack of stratified archaeological finds and coin-dated examples affects the ability to establish chronologies within individual classes, a particularly acute problem in the dating of Class A strap-ends. Thus, although specific Class A strap-ends may be attributed an early 9th-century date on stylistic grounds, on current evidence it is impossible to gauge whether its five main types were contemporary or followed a chronological sequence during the course of the 9th century. Given the fact that the overall period of currency for the class as a whole was no more than 150 years, it is perhaps more likely that the types were introduced over a relatively short period of time. Ultimately, the answers to such questions await resolution by future archaeological discoveries and through refining the chronologies of artefacts with which they are commonly discovered in association.

CHAPTER 7: DISTRIBUTION

7.1 Introduction

This chapter explores, with the aid of maps, the spatial distribution of strap-ends classified in Chapter 3. Discussion will firstly assess the general national distribution of findspots and then focus on each of the main typological classes and, within these, on the distribution of types, sub-types and groups. The caveats highlighted in Chapter 4 concerning the biasing effects of metal-detecting on the distribution of these finds are worthy of explicit consideration throughout the following discussion.

At this stage, it is apposite to present some explanatory points relating to terminology, and the distribution maps which accompany this chapter. The terms 'England', 'Scotland' and 'Wales' are used in the context of the modern-day political geography of Britain. They have no relevance to the political make-up of Britain during the period under scrutiny and should be regarded only as convenient labels.

The accompanying distribution maps fall into two main categories, the first, applied to the larger classificatory 'groups', display a count of strap-ends from individual findspots. On these, the quantitative ranges used are purely arbitrary, normally being equal divisions such as 1-5 and 5-10. However, to avoid proliferation, in some cases the range encapsulating the highest number of finds is greater in order to accommodate those sites which are unusually productive. The second category of map, which display the distribution of smaller groups side-by-side, only records individual findspots. In both cases, strap-ends recorded as pairs or trios in the catalogue are treated as a single find.

7.2 National distribution

A distribution map of all recorded findspots of Late Saxon and Viking-age strap-ends illustrates the wide coverage of this artefact type across the country (Map 2). In accordance with the trend outlined in Chapter 4, the densest distribution occurs south east of a line drawn roughly from the Bristol Channel across to Whitby on the North Yorkshire coast. North and west of this geographical line the coverage is much more dispersed and noticeably restricted to coastal sites. The factors influencing this particular distribution have been discussed at length in Chapter 4; suffice it to say this is largely the result of patterns of land-use combined with the activity of metal-detectorists.

Within the area marked by a generally denser distribution of finds, there are more localised patterns. Noticeable blank spots often correspond to areas considered to represent 'marginal' habitats, including the Weald, the Berkshire Downs and the Fens. Other less productive areas relate to present-day factors, such as the densely populated conglomerations of Greater London and the West Midlands.

Conversely, within this geographical zone, there are also areas of denser distribution. These become even more clearly defined on a map displaying the number of discoveries relating to each findspot. The most obvious areas include the regions covered by the modern counties of Suffolk, Norfolk, Lincs and N. & S. Humb. The regions not only contain the densest distribution of single findspots, but also the highest proportion of sites yielding the maximum range of eleven to thirty-six strap-ends each. This eastern belt was noted in Chapter 4 as being the most heavily detected region of the British Isles. As alluded to in this earlier chapter, this pattern is accentuated by the fact that these areas also support the most integrated and developed systems for finds identification and recording. Elsewhere, the spread of findspots is more dispersed, exceptions being Wilts and northern Kent. These concentrations may also be related to pragmatic factors. Wilts, for example, is particularly well served as the personal research interests of the curator of the county

museum encourage him to actively liaise with the local metal-detecting fraternity to record Late Saxon artefacts (Dr Paul Robinson pers. comm.). This is reflected in the distribution of other Late Saxon artefacts, including 9th-century coins (Metcalf 1998b, fig. 1) and stirrup-strap mounts (Williams 1997, fig. 10).

A discussion of the national distribution of finds highlights the difficulties involved in establishing the original archaeological patterns of circulation at this level. This is not to say that contemporary patterns of use were significantly different or reversed, rather that the current distribution represents a significant skewing eastwards, with an over-representation of discoveries in the counties of East Anglia, as well as Lincs and Humb. The area to the north west of the aforementioned geographical line, equating to Fox's 'Highland zone' (1932), is a region that was more sparsely populated throughout history and prehistory, as it is today. Increased excavation and detecting in this area may, in the future, produce new finds resulting in a more even, national spread, but it is unlikely to be as productive as the south east, neither in terms of the number of new sites or in the productivity of individual sites.

Ultimately, the value of interpreting the overall distribution of Late Saxon and Viking-age strap-ends is severely limited. However, the comparison of that of individual varieties, as attempted below, provides greater insight into contemporary patterns of production and circulation.

7.3 The distribution of Class A strap-ends

Class A strap-ends represent the most popular and widely used variety discussed in this survey. Their distribution mirrors that of strap-ends in general, with a wide coverage stretching from Trewhiddle in Cornwall to Westness, Rousay, Orkney (Map 3). Similarly, the densest distributions are found in the eastern counties of Norfolk, Suffolk, Lincs and N. & S. Humb, with more dispersed coverage across the

remainder of central and southern England. In accordance with the distribution of strap-ends as a whole, the number of find-spots within England falls off markedly in areas to the north and west, including north-west England, Devon and Cornwall. Additionally, many of the find-spots associated with these less productive regions are situated in coastal locations.

A limited number of Class A strap-ends have been discovered in Scotland and Wales. Only one Class A strap-end recorded in the survey sources from within the borders of Wales (cat. no. 384), although two Class E examples are also known (see below); significantly, they are all from the extreme south east, on or close to the coast of South Glamorgan. These finds augment the small number of diagnostically Anglo-Saxon metalwork discovered in Wales (Redknap 1995, 68-9). This includes the earlier 'Germanic' metalwork and dress-accessories of 6th- to 7th-century date from the high-status site of Dinas Powys, South Glamorgan (Graham-Campbell 1991). Additionally, there are eleven single finds of Anglo-Saxon coins ranging in date from the late 8th to 11th centuries (Dykes 1976, 27-8). Interestingly, the strap-ends and four of the coin finds cluster in this area of Wales, suggesting that they could be a reflection of the growing political contacts established between south-east Wales and the West Saxon dynasty from the 9th century onwards (Davies 1982, 114). In the case of the coins, however, their presence could also be explained by Viking activity, the Glamorgan finds representing the eastern extremity of the coastal distribution of both Viking hoards and single coin-finds which cluster on the north and south coasts of Wales (Dykes 1976, 26).

Within Scotland most of the fourteen findspots of Class A strap-ends are restricted to coastal regions south of the Forth-Clyde boundary. This includes finds along the coasts of East Lothian and the Borders, south east of Edinburgh. Finds to the west include a spread along the coast of Dumfries and Galloway stretching northwards to the beach site of Stevenston Sands, Strathclyde. This distribution is commensurate with a variety of other evidence from Anglian Northumbrian settlements in southern

Scotland during the 8th and 9th centuries, including Old English place-names, sculpture (Proudfoot & Aliaga- Kelly 1996) and coinage (Metcalf 1987).

Discoveries north of this geographical boundary are far rarer, being restricted to three findspots; consisting of two pairs, from the Rogart hoard, Sutherland (cat. no. 614), and a Viking burial at Westness, Rousay, Orkney (cat. nos 615-6), and a singleton from Reay Links, Caithness (cat. no. 613). These isolated finds should be compared with the distribution of other Anglo-Saxon artefacts of 8th- and 9th-century date discovered within Pictish territory. These include hoard finds, such as the sword pommel from St Ninian's Isle, Shetland (Webster 1991, cat no. 177), and the two pierced Anglo-Saxon coins of 9th-century date from the Croy hoard, Inverness (Wilson 1973, 82). Additionally, there are a few single finds of Anglo-Saxon ornamental metalwork, such as the horn-mount from Burghead, Morayshire (Graham-Campbell 1973b; for an up-to-date list see Proudfoot & Aliaga-Kelly 1996, 6-7) and of coinage (Bateson 1995). These isolated finds support the interpretation that it was unlikely that Anglian settlement extended north of the Forth, and thus most likely represent imports from regions of Anglo-Saxon settlement (finds listed in Proudfoot & Aliaga-Kelly 1996, 1). The discovery of Anglo-Saxon metalwork within Pictish territory, if not the result of Viking activity, as is the case at the Westness, could be a reflection of limited contact stimulated by political and religious ties that existed between Pictland and Northumbria during the 8th and 9th centuries (cf. Higham 1993, 141).

It is compelling that the strap-ends from this northern region of Scotland represent a stylistically homogeneous group (A2b), suggesting they may well have been manufactured within the Anglian region of northern Northumbria, rather than any further south in Anglo-Saxon England (see below).

7.3.1 Type 1 (Trewhiddle style) (Map 4A)

Strap-ends of Class A decorated with Trewhiddle-style motifs are the most ubiquitous manifestations of this class and have a distribution reflecting the importance and widespread popularity of the style in England. The general distribution of the type conforms closely to that of the overall class, and thus does not need to be repeated here. Notable differences, however, include the lack of findspots north of the Forth/Clyde boundary in Scotland, the most northerly location being the Northumbrian monastic site of Aberlady in East Lothian. Another difference is the relative paucity of finds from Norfolk and Suffolk, especially when compared with the significance of these counties for the discovery of other types of Class A strap-end, especially its Type 5. A possible explanation for this pattern is discussed in the section relating to A5 strap-ends below.

It has been noted previously in Chapter 6 that the form of the terminals and palmettes associated with some Trewhiddle-style strap-ends represented regional stylistic varieties. Before discussing classified groups, therefore, an exploration of the distribution of these stylistic variants is attempted (see Map 4B). Such include a terminal type which is characterised by the use of bulging eyes and curly comma-shaped ears (e.g. Fig. 3.1E), distinguishing it from the predominant form characterised by oval ears with lunate incisions and eyes, which are often incised (e.g. Fig. 3.9A). The second stylistic variant relates to the occasional use of distinctive looping palmettes which are distinct from the trilobate forms used on the majority of Class A strap-ends (see Chapter 6).

In some cases, the two stylistic variants associated with the terminal and palmette are used together on the same strap-end, but usually only one is used in combination with conventional features. A glance at a map which records the findspots of strap-ends decorated with these stylistic attributes affirms a distinct northern distribution. All the strap-ends combining both these features have been discovered north of the Wash; three are notable for their very northerly findspots, two from Northumberland

and the third from Cumbria. Similarly, all the strap-ends decorated with looping palmettes have been discovered north of the Humber. Despite the fact that the use of comma-shaped ears is more widespread, with examples from as far south as Bucks, the overwhelming majority have been discovered north of the Wash.

This evidence provides a strong case for associating these stylistic attributes with provincial manufacture in an area somewhere in the east of England, north of the Wash. This attribution is also strengthened by the fact that they are often associated with stylistically homogeneous groups of strap-end with distinct northern distributions (see Groups A1, viii and xi below).

a) Sub-Type A1a (Map 5)

A distribution map of Class A strap-ends decorated with a single panel of Trewhiddle-style decoration demonstrates the widespread coverage of the Sub-type A1a, equal to that of the class as a whole. An important distinction, however, is the popularity of the sub-type in Lincs, Humb and N. Yorks. This region includes all sites yielding the maximum number of six to fifteen strap-ends, the most productive being South Newbald in N. Humb. Most of the findspots located south of these counties represent singletons, with a handful of sites producing up to five finds each.

Discussion will now turn to the individual typological groups comprising Sub-type A1a strap-ends. In some instances, exponents are too few to derive meaningful conclusions from a study of their distribution. As a result, to avoid unnecessary commentary, only groups for which the distributions are considered significant are described in detail. Discussion also extends to the findspots of individual strap-ends which are sufficiently closely related as to suggest that they are products of the same hand or workshop. The accompanying maps display the distribution of all classified groups.

The eight members of Group A1a, i are widely distributed from Whitby, N. Yorks, to Trewhiddle in Cornwall, although the majority have been discovered north of the Wash (Map 6). Similarly, A1a, ii strap-ends are also dispersed widely, with discoveries as distant as Canterbury and Stevenston Sands, Strathclyde, Scotland (Map 6). It is perhaps significant, considering the overall popularity of A1a strap-ends in the north of the country, that nearly half of the group should cluster in south-east England. It should be noted, however, that the four southern strap-ends on which this design occurs are sufficiently diverse in other stylistic details and morphology to discount the possibility that they emanated from a single source of manufacture. Group A1a, iii has a more defined distribution centred on N. Humb, though members do penetrate southwards into Lincs and Norfolk; an outlier has also been excavated from Canterbury (Map 6).

The popular group of A1a, iv strap-ends is fairly dispersed, though some stylistic variants have more defined distributions which deserve comment (Map 7). One of these, characterised by the use of frog-headed animals inlaid with enamel, is represented by three strap-ends discovered within thirty kilometres from each other, at Owmby and Owston Ferry, Lincs (cat. nos 284-5), and Worksop in northern Notts (cat. no. 289). This distributional evidence, together with their shared morphology and decoration, suggests a single source for their manufacture.

The small number of strap-ends belonging to Groups A1a, v and vi are in each case widely dispersed, apart from the two A1a, vi strap-ends which come from the same site of Whitby, N. Yorks (Map 7).

It has been proposed in Chapter 6, and elsewhere (Bailey 1993), that the considerable homogeneity displayed by group A1a, vii strap-ends suggests production from the same workshop and, even in some instances, the same working model. To a large extent, the distributional evidence also supports this attribution (Map 8). Of the twelve recorded findspots, nine lie within the counties of Lincs and Humb. The

remainder derive from northern locations, Hale in Cheshire, Asby in Cumbria and Wooperton in Northumberland. Although some of these findspots represent quite large distances apart, especially on an east-west axis, it should be remembered that by the 9th century, this territory to the west of the Pennines was under Northumbrian control (Bailey 1988, 3; Higham 1993, 111). The significance of this distribution within Northumbria will be discussed more fully below.

Group A1a, viii strap-ends, although few in number, also display a degree of stylistic and morphological similarity suggesting a single source of manufacture. All four are located in counties close to, or north of the Wash, two in S. Yorks, a third in Cumbria (cat. no. 314) and the fourth at Coldingham Priory, Northumbria (cat. no. 315). As with Group A1a, vii, examples have been discovered on both sides of the Pennines (Map 8).

Although less homogeneous than the above, Group A1a, ix strap-ends have a similar distribution centred on the counties flanking the Humber, with an outlier located on the western side of the Pennines at Brougham Castle, Cumbria (cat. no. 318, Map 8).

Group A1a, x strap-ends are too few in number to place much significance on their distribution, though they have a distinct northern spread, the most southerly findspot being at Heacham on the north Norfolk coast (cat. no. 327). Group A1a, xi, characterised by the use of borders formed by punched annulets, is also far commoner north of the Wash, with two northerly finds from Wallsend, Northumberland, and Appleby, Cumbria (cat. nos 341 & 332, Map 9).

The popular group of strap-end, A1a, xii, has a particularly wide distribution, though it is rare north of the Humber (Map 9). South of this geographical boundary, members are dispersed right across central and southern Britain, though it is significant that none penetrates into the East Anglian heartland. Within the group as a whole, the variety distinguished by the use of speckled interlace has a more closely defined distribution focused on Lincs and S. Humb.

Group A1a, xiv, characterised by decoration consisting of two or more interlacing animals, has a marked eastern distribution, the most westerly findspot being Wendover, Bucks (Map 10). A significant number cluster in the region associated with eastern Cambs and western Norfolk, though outliers have been discovered further north into Lincs, N. Yorks and Northumbria.

The group of strap-ends decorated with fully developed Trewhiddle-style foliate decoration, A1a, xv, is associated with two notable finds concentrations (Map 11). The first is located in north-west Norfolk and the second in the south of England, marked by the sites of Winchester and Portchester, Hants (cat. nos 423-4 & 422), and Chichester, W. Sussex (cat. no. 432). Two additional examples come from Ipsden Heath, Oxon, and High Easter, Essex, both comparatively southerly locations (cat. nos 430 & 421). Strap-ends decorated with nicked, lancelet leaves, Group A1a, xvi, have a dispersed distribution across southern and eastern England, as does group A1a, xvii strap-ends decorated with a formalised rosette (Map 11. The findspots of Group A1a, xviii strap-ends, characterised by their stylised paired leaf designs, are nearly all confined to the eastern side of the country, especially Norfolk and Lincs (Map 11).

Strap-ends decorated with a single panel of interlace, groups A1a, xix and A1a, xx, have dispersed distributions across central and eastern England though they are comparatively uncommon north of the Humber (Map 12).

b) Sub-Type A1b (Map 13)

As a sub-type, strap-ends decorated with two or more fields of Trewhiddle-style decoration (A1b) have a wide distribution throughout much of central and eastern England. A comparison with Sub-type A1a strap-ends reveals a significant difference, however. None has been discovered north of Cottam on the Yorkshire Wolds, in contrast to several Sub-type A1a strap-ends discovered north of this

region, into southern Scotland. Although this sub-type is generally less popular than its cousins, it is particularly poorly represented in N. Humb and Lincs, regions noted as being especially productive in terms of the number of individual findspots of A1a strap-ends and the productivity of individual sites.

A closer look at the individual groups of Sub-type A1b strap-ends highlights some interesting patterns. The two varieties of Group A1b, i strap-end, characterised by the use of billeted borders and chevrons, have wide distributions covering much of central and southern England. Examples have also been discovered north of the Humber in some numbers, the most northerly find coming from Glenluce Sands, Dumfries & Galloway, Scotland (cat. no. 496). Group A1b, ii strap-ends, identified by the use of four fields of decoration, have a more defined distribution (Map 13). Particularly interesting is a clustering of high-quality examples in Kent. Several other examples have been discovered in central and southern England, producing a spread notable for its south-western bias in comparison with other groups of Trewhiddle-style strap-end - the most northerly example with an accurate provenance is from Cuerdale, Lancs (cat. no. 539, although this is, of course, a Viking hoard context, and should be discounted). This evidence suggests that the group could possibly have been manufactured in a centre located in the south, a strong contender being Kent itself. A1b, iii strap-ends are rare, though it is also noticeable that none has been discovered north of the Humber (Map 13).

7.3.2 Summary and interpretation

Overall, a study of the distribution of Type A1 (Trewhiddle-style) strap-ends has demonstrated their widespread currency throughout the areas of Anglo-Saxon settlement. This conclusion reinforces the view that this style, as represented on a range of contemporary ornamental metalwork, enjoyed popularity throughout the whole of Anglo-Saxon England.

At a more refined level it has been shown that some individual stylistic groups have more defined distributions. In some cases, these groups are associated with the use of a particular terminal form and palmette which differ from the mainstream forms used on most strap-ends. This was found to be the case with some strap-ends found in the north of England. In most instances, localised patterns relate to the style of the central panel of decoration on which the typological groups are based. Generally, strap-ends decorated with a single Trewhiddle-style animal (Groups A1a, i-vi) are commoner in the north of the country above the Wash, with several examples derived from productive sites such as Cottam and South Newbald, N. Humb, and Whitby, N. Yorks.

Particularly well defined are the distributions of Groups A1a, vii and viii, which are discovered on sites located north of the Wash. Considering the stylistic and morphological homogeneity of the groups, it is likely that this distributional evidence reflects the activity of a manufacturing source or sources based in Northumbria. It is significant that members of both groups are discovered on both sides of the Pennines, extending well north into Cumbria and Anglian Scotland. A similar pattern, though not as well defined, emerges for Groups A1a, viii, xix, xx and xi, all of which have findspots concentrated in the north-east of England with the odd outlier discovered on the western side of the Pennines. This accords with other artefactual evidence of Nothumbrian activity extending westwards across the Irish Sea. The distribution of 9th-century Northumbrian stycas, for example, is limited to a small number of coastal sites west of the Pennines, interpreted as reflecting trading activity on the Irish Sea littoral, or with findspots located in the interior, trans-Pennine routeways (Metcalf 1987, 364, fig.1; Higham 1993, 168).

The fragmentary strap-end mould from Carlisle, in sharing a number of stylistic and morphological features characteristic of the above groups (Chapter 5; Taylor & Webster 1984), provides an important link between the distributional evidence and the attribution of a Northumbrian manufacturing origin. Moreover, the possible existence of a manufacturing centre based in Carlisle makes an important

contribution to our knowledge of Anglian settlement in north-west Northumbria (Bailey 1988, 3; Cramp 1995).

A variety of other Trewhiddle-style artefacts may be ascribed to this regional Northumbrian tradition of metalworking. This includes a series of sword fittings with distinctive, simplified, geometric ornament which form a small concentration of finds from the north of England, notably Yorkshire (Webster in Webster & Backhouse 1991, cat. nos 250 & 251). Apart from the swords, this severe geometric ornament characterises other Trewhiddle-style metalwork with a northern provenance, including the larger of the Beeston Tor brooches (Webster in Webster & Backhouse 1991, cat. no. 245b) and the Talnotrie pins (ibid., cat. nos 248 b & c). In addition, there is a group of silver and gold finger-rings from the north distinguished by their disc-shaped bezels, decorated with single speckled beasts, reflecting a distinct and simplified regional version of the Trewhiddle style (Webster in Webster & Backhouse 1991, 237, cat. nos 203 & 204). Other Trewhiddle-style variants associated with the north of the country include the frog-headed animals used on one of the Lilla Howe strap-ends, the Selkirk ring (ibid., cat. no. 203), and the Scales Moor, Ingleton, sword pommel (Wilson 1964a, cat no. 65), the latter two objects being products of the workshops already highlighted. In its use of multi-headed animals, the Yorkshire sword pommel introduces a further stylistic trait associated with these workshops as evidenced on several groups of strap-end also associated with this region, especially Groups A1a, vii and viii. There is also limited physical evidence of a workshop based in York in the form of two bone motif-pieces from Coppergate and Station Road (Webster in Webster & Backhouse 1991, cat. nos 254 & 255). The crisply executed Trewhiddle-style decoration associated with these two artefacts indicates the city was home to craftspeople fully conversant with the style during the later 9th and early 10th centuries.

It is interesting, considering the acceptance of the Humber as the traditional boundary between the kingdoms of Lindsey and Northumbria (Higham 1993, 80), that it appears to have little or no influence on the distribution of many of the stylistic

groups centred in the north. Groups A1a, vii to xi, for example, both have spreads that extend north and south of this geographical line. It is a strong possibility that their distribution is a reflection of the unifying force of the Humber in terms of regional communication links and trade (see Metcalf 1987, 365-70; Higham 1993, 169; Loveluck 1998, 157-8), rather than its potential role as a political or geographical barrier. This suggestion is supported by research into coinage and pottery. In the case of the former, 8th-century Northumbrian sceattas have been discovered on sites on both sides of the Humber (Loveluck 1996, 44, fig. 15), while the later Northumbrian stycas, minted in York, are being found in increasing numbers in the east Midlands and East Anglia (Metcalf 1987, 367; 1998, 177-9, fig. 5). Meanwhile, East Anglian Ipswich-ware pottery is being found in increasing quantities from sites north of the Humber, on sites such as Beverley, N. Humb, Wharram Percy and Fishergate, York (Higham 1993, 169; Loveluck 1998, 158; Blinkhorn 1999, fig. 2). This certainly reflects the importance of the Humber within the network of trade along the east coast, and as an artery into the Trent and the East Midlands river systems (Loveluck 1998, 158). The complementary patterns evident in the distributions of these artefacts corroborate the view that the importance of the Humber as a link within inter-regional trading networks outweighed any significance it may have had as a political barrier by the 9th century.

Strap-ends characterised by more complex designs combining one or more animals and interlace (Groups A1a, xii and xiv), in contrast to those groups discussed thus far, are better represented in the south of England. This is especially the case with Group A1a, xii strap-ends, distinguished by the use of animals degenerating into interlace, which have a very dispersed spread across central and southern counties. Findspots associated with these groups north of the Humber are a comparative rarity. A similar pattern also emerges for the distribution of strap-ends defined by the use of a single panel of interlace. The degree of stylistic diversity combined with the unfocussed distribution of these strap-ends prevents their attribution to a single source of origin. It is possible, on the basis of stylistic affinities - such as those displayed by the two A1a, xii strap-ends from Flixborough, S. Humb (cat. nos 325-6,

Fig. 3.5B & C) - to assign individual examples to a common source, but such cases are exceptional. On the basis of the distributional evidence, it may be proposed that members of these groups are likely to be associated with different networks of production to those with marked northern distributions.

Strap-ends decorated with a single field of Trewhiddle-style foliate decoration (Groups A1a, xv-xviii) are generally restricted south of the Humber, their overall distributions being fairly dispersed. Worthy of comment are the two concentrations of Group A1a,xv strap-ends in west Norfolk and Winchester. In the case of the former, this region of north-west Norfolk has been highlighted as a likely location for a source specialising in the manufacture of Trewhiddle-style metalwork (Webster in Webster & Backhouse 1991, 231). This attribution rests on the recognition of distinctive stylistic features shared by several Trewhiddle-style artefacts discovered in the locality. Most notable is the hoard of six disc-brooches from Pentney, one of its two pairs being decorated with speckled fruiting plants closely resembling those used on the Norfolk strap-ends (Fig. 6.4). A further stylistic link associated with this workshop, provided by the ornament on two of the brooches, is the use of distinctive, bag-bellied animals which reappear on other local artefacts, such as a motif-piece from Bawsey (Webster in Webster & Backhouse 1991, cat. no. 188a) and a fine silver strap-end from Lincoln (cat. no. 407, Fig. 6.3D).

The three Group A1a, xv strap-ends from Winchester and Portchester, Hants (cat. nos 421-3) and Chichester, W. Sussex (cat. no. 429), represent the products of a regional tradition associated with Winchester and/or its hinterland. Although they draw upon a similar plant motif as the aforementioned Norfolk examples, their more naturalistic, ragged leaves and fleshy palmettes look forward to the plant ornament associated with the Winchester-style art of the 10th century (see Chapter 6, Fig. 6.5). The closest parallels to the ornament come from other artefacts associated with an incipient stage in the development of the Winchester style dating to the last quarter of the 9th century. Most notable amongst these is the foliate design on the underside of the Alfred Jewel (Hinton 1974, cat. no. 1), its sketchy appearance and hatched

background being closely paralleled by the plants on the Portchester strap-end, a silver hooked tag from the same site (Hinton & Welch 1976, no. 48, fig. 136) and the pair of strap-ends from Chichester. Such finds hint at the importance of Wessex, and Winchester in particular, as a centre for the introduction and development of the Winchester style in non-manuscript art (see Hinton 1996b, 215).

In contrast to A1a strap-ends, the area north of the Humber features less prominently on the map displaying the distribution of A1b multifield strap-ends. Although some of the groups belonging to this sub-type are widely dispersed in central and southern England, most notably Group A1b, i, the predominantly southerly distribution of Group A1b, ii and iii is of significance. The use of elaborate terminals provides another shared stylistic attribute linking members of the sub-type discovered in the south of the country.

The cluster of elaborate multifield strap-ends in Kent and neighbouring south-eastern counties, in particular, may indicate the location of a manufacturing source. In support of this attribution is the discovery of other high-class, Trewhiddle-style metalwork in the region. This includes a series of silver hooked tags, one from excavations in Canterbury, a second with an east Kent provenance (Graham-Campbell 1982a, fig. 2, nos 1 & 2) and a third recently discovered by a detectorist in north Kent (Fig. 6.2D). Like the Kentish strap-ends, the decoration on the hooked tags is divided into several fields, each enclosing an individual Trewhiddle-style motif, usually of zoomorphic interlace. The latter two examples provide an additional stylistic connection to strap-ends in the use of zoomorphic hooks in the same tradition as the animal-head terminals used on strap-ends.

The attribution of a Kentish manufacturing centre finds additional support in the suggestion that early 9th-century illuminated manuscripts produced at the scriptorium of Christchurch, Canterbury, used contemporary Trewhiddle-style metalwork as exemplars for elements of their decoration (Wilson 1984, 94; Brown in Webster & Backhouse 1991, 195, 215).

7.3.3 Type 2 (Geometric)(Map 14)

Strap-ends of Type A2 have a widespread distribution covering a similar geographical range to that associated with Type 1. One contrast, however, is the comparative lack of A2 strap-ends in northern England and southern Scotland, though the number of sites in question is perhaps too small to be of particular significance. The small cluster of the type represented by A2b strap-ends in northern Scotland presents another obvious difference to be considered below.

Narrowing the analysis to the distribution of individual sub-types reveals some mixed patterns. Most of the popular sub-types, such as A2a, A2d, A2h and A2i, have dispersed distributions across much of eastern, central and southern England which invite little comment (see Maps 15, 16 & 17). Perhaps most interesting is the cluster of strap-ends decorated with roundel and step designs (Sub-type A2b) in northern Scotland, including those from Reay Links and Rogart, Highland, and a female Viking grave at Westness, Rousay, Orkney (cat. nos 613-16, Map 15). The Scottish finds are of particular significance given that they represent the most northerly discoveries of Class A strap-ends.

It is frustrating that both pairs from Westness and Rogart are derived from contexts which could represent their displacement from the locality in which they were originally manufactured. Stylistic affinities shared between all five strap-ends, however, including their crudely executed roundel decoration and highly stylised terminal and split-end features, increase the likelihood that they are products of a single source, or hand, possibly based somewhere in Anglian Scotland. The only other sub-type worthy of discussion in terms of its distribution is that characterised by a design of conjoined circles divided into quadrants (A2f). The three examples are distributed in a line across central England, from Maiden Bower, Beds, to Caister St Edmund, Norfolk, suggesting the presence of a workshop in this locality (Map 16).

The widespread distribution associated with the majority of A2 strap-ends is a reflection of the pervasive nature of Class A strap-ends as a whole. Such a pattern, seemingly little effected by political and geographical boundaries, could simply relate to the portable nature of the media. Strap-ends could have travelled considerable distances either as an item of costume, or as an object of trade or exchange, or in the possession of an itinerant craftsperson. The simple geometric designs associated with Type A2 strap-ends, in particular, could easily have been copied, so ensuring their widespread adoption. This is also reflected in their stylised terminal and palmette features which bear little resemblance to those associated with better quality strap-ends. The distribution is certainly too dispersed, and the level of stylistic and morphological diversity too great, to suggest that the pattern is the result of widespread dispersal from a single production centre. This pattern, repeated in the distribution of many other groups of Class A strap-end, suggests a fairly low-level of production, which in some cases may have been associated with itinerant craftspeople. This evidence contrasts with the defined distributions associated with more homogeneous groups of Class A strap-end discussed elsewhere. This dichotomy argues for a flexible interpretative model for understanding the production systems underlying these artefacts, an interpretation also suggested by a study of their manufacture (see Chapter 8).

7.3.4 Type 3 (Anthroporphic) (Map 18)

The small collection of six strap-ends belonging to Type A3, characterised by human representations, has a widespread, overall distribution, though a detailed consideration of the style in which the figures are represented provides more refined an interpretation. The finds from Selsey, West Sussex and Cranborne, Dorset, decorated with full-length, clothed human figures belong to an artistic tradition firmly rooted in the Wessex region during the late 9th and 10th centuries, as previously argued in Chapter 6 (cat. nos 727 & 731). The findspots of the three strap-ends characterised by relatively crude naked figures with upraised arms, meanwhile, demonstrates that this particular imagery was more widely known. In

the case of the Brandon strap-end (cat. no. 730), it is clear that this design continued to inspire East Anglian craftpeople into the 10th century as demonstrated by its occurrence on Class E strap-ends discovered in the region (see Chapter 3, Group E2a, i).

7.3.5 Type 4 (Enamel)(Map 19)

Overall, Type A4 enamelled strap-ends have an interesting distribution which is polarised in two regions. The first is in the east, stretching north into Yorks and south through Lincs into Norfolk. The second is based on a region running east-west along the south coast from Kent into Dorset. Amongst the southern group, Sub-type A4d strap-ends, with enamelled annulet designs, predominate, though they also feature amongst the eastern series. Sub-types A4a and b are found in both regions, whereas A4c strap-ends, characterised by four panels of enamel, are restricted to south Lincs and west Norfolk. This distribution is difficult to explain especially on the basis of the small number of finds. There is, however, important evidence to suggest that the East Anglian region was home to a tradition of enamel-working dating to the Early Saxon period. This rests on the identification of enamel on a number of dress-accessories and mounts of 6th- to 7th-century date discovered in the region (Scull 1985). It is also of relevance that the distribution of silver-wire strap-ends (Type A5), which are closely related in decorative technique, is also centred on East Anglia (Thomas 1996, 88).

7.3.6 Type 5 (Silver-wire)(Map 20)

Of the various types of Class A strap-end, silver-wire strap-ends (Type A5) have the most defined distribution with an overwhelming 83 per cent of the ninety-four recorded examples discovered within the modern counties of Norfolk and Suffolk. Outliers have been discovered on sites close to the eastern seaboard south into Essex and into Kent (the most southerly findspot being Ramsgate), and north beyond the Humber estuary onto the Yorkshire Wolds, from sites such as Cottam and Thwing.

Outliers are also known to the west in Cambs and Herts, just beyond the western fringes of East Anglia, but also further afield, as represented by discoveries from Repton, Derbs and Huncote, Leics (cat. nos 813 & 853). Of significance is the stray example from the site of Hamwic, which is accompanied by another Hants find discovered by a metal detectorist just outside Winchester (cat. nos 789 & 817).

The main axis of dispersal along the eastern side of the country is a reflection of the importance of east coast trading networks during the Mid-Late Saxon period. This is mirrored in the distribution of other contemporary artefacts often discovered on sites which were either strategically positioned, or able to take advantage of such links, a good example being Flixborough, S. Humb (Loveluck 1998, 157-8). Outliers to the west could similarly be related to networks of trade and exchange. There are strong grounds for considering the Hamwic find, for example, as an East Anglian export, in light of the archaeological implications of the site and the widespread evidence for trade and exchange (Hinton 1996a, 98-101). It should be stressed, however, that as an export it is both highly unusual, and of particular interest, in terms of the overall artefactual assemblages from both Hamwic and Ipswich, the two best known trading centres of Middle Saxon England, which suggest that these regions shared little or no commercial contact. Identifiably East Anglian products, such as Ipswich ware and Series Q and R sceattas, for example, are not found in Hamwic and rarely in Wessex as a whole. While conversely, the Hamwic Series H sceattas are not discovered on Middle Saxon sites in East Anglia (see Blinkhorn 1999).

Outliers may be the result of other links, as in the case of the silver-wire strap-end from Repton, Derbs. Its occurrence this far west is possibly related to the ecclesiastical links between Repton and East Anglia hinted at in documentary evidence of the period. Repton is recorded as being founded on land granted to the monastery of Breedon, Leics, itself a daughter foundation of the so-far unidentified monastery of *Medeshamstede* (Peterborough Abbey) (Biddle & Kjølbe-Biddle 1985, 234). Meanwhile, St Guthlac is chronicled as having taken his vows at Repton and soon after founding a hermitage at the fenland site of Crowland, which was at this

period just beyond the western fringes of the East Anglian kingdom (Colgrave 1956, 4).

A distribution map, indicating the findspots of the individual sub-types of silver-wire strap-end, highlights a distinct eastern penetration of Sub-type A5c towards the east coast of Norfolk and Suffolk, a region notable for the absence of other varieties. Another feature is the dense distribution of Sub-types A5a and b strap-ends in the hinterland of Ipswich. In the case of the latter, caution should be exercised before attributing these clusters to the activity of workshops based in the wic, since they could equally be the result of metal-detecting activity. The Deben Valley to the north east of Ipswich, for example, has a particularly high incidence of detecting (John Newman pers. comm.). Despite this, Ipswich remains a strong candidate for the location of such a workshop on the basis of excavated evidence for fine metalworking retrieved from 9th- to 10th-century contexts at the Buttermarket site (Wade 1993, 148). This material also includes possible moulds for the manufacture of strap-ends (John Newman pers. comm.). The fact that Ipswich was also the most likely location for a mint associated with East Anglian Series R sceattas (Metcalf 1994, 502-23) indicates that the Middle Saxon settlement would have had the supply of silver necessary for the production of the decorative inlays which characterise the type.

The distribution of Type A5 strap-ends provides some of the most conclusive evidence for the regional manufacture of Class A strap-ends. In this specific example, the range of stylistic and morphological diversity displayed by individual members of the type suggests that they are products of several sources or individuals rather than of a single centralised 'workshop'. This interpretation accords with the scale of production attributed to the majority of Class A strap-ends (see Chapter 8).

In this case, an East Anglian attribution is strengthened further when the analysis is extended to embrace other contemporary metalwork. The distribution of hooked tags decorated in the same manner, for example, is also distinctly East Anglian. Although

less common than the strap-ends, examples of this related dress-accessory, which clearly belong to the same metalworking tradition, nearly all derive from the counties of Norfolk and Suffolk (e.g. Webster in Webster & Backhouse 1991, cat. no. 188g). To date, only one example has been discovered outside this region, from South Newbald, N. Humb. The location of this site is consistent with the distribution of outliers of silver-wire strap-ends along the eastern side of the country.

Before leaving this discussion of the distribution of Type A5 strap-ends, it is important to highlight the fact that the popularity of the type within East Anglia may well have been responsible for the comparative lack of the otherwise ubiquitous Trewhiddle-style strap-ends in this region, as noted above. The fact that East Anglia was also home to an indigenous tradition of Trewhiddle-style metalworking suggests that both types competed within the same market and provided a choice not available in other regions.

7.4 The distribution of Class B strap-ends (Map 21)

Although the number of Class B strap-ends recorded in the survey is considerably less than that of Class A, their distribution is similarly extensive, with members discovered at findspots as distant as Tarrant Crawford, Dorset, and the Brough of Birsay, Orkney (cat. nos 1037 & 1015). The eastern side of the country, noted for being most prolific in the discovery of Class A strap-ends, is still prominent on a distribution map of Class B strap-ends. Other notable concentrations occur in the south, especially on sites such as Winchester and Canterbury, which have produced several examples each. The class also penetrates north of the Humber, with a particular concentration in York and sites on the Yorkshire Wolds. Further north, the small number of findspots are dispersed in coastal locations such as Whithorn, Dumfries and Galloway, and Aberlady, East Lothian.

The findspots of stereotyped Class B strap-ends which carry incised or cast transverse mouldings and expanded split-ends, also have a wide distribution across

southern and eastern England (Map 22). The most northerly location, however, is Thwing on the Yorkshire Wolds. Compared to Class A strap-ends, the south of the country, including counties such as Kent, Hants and Dorset, is better represented; this region contains three of the four sites which have produced the maximum total of four to seven examples. The possibility exists that these simple, stereotyped strap-ends were produced in quantity within urban centres such as Winchester and Canterbury.

7.4.1 Type 1 (Trewhiddle-style) ((Map 22)

The comparatively small number of Trewhiddle-style strap-ends belonging to this class (Type B1) have a distribution confined to a belt running east-west across the southern half of the country, from Gisleham on the east coast of Suffolk (cat. no. 981) to Cheddar in Somerset (cat. no. 980). It is of significance that the most northerly findspot is in Norfolk - taking into consideration the much more dispersed distribution of Type A1 strap-ends, which were found to be particularly popular north of the Humber.

7.4.2 Type 2 (Silver-wire)(Map 22)

The two Type B2 (silver-wire) strap-ends with an accurate provenance are both from East Anglian findspots (cat. nos 984-5). The third has no closer provenance than 'Essex'. The significance of this distribution need not be repeated, given that these examples are clearly representative of the same metalworking tradition as responsible for Type A5 strap-ends.

7.4.3 Type 3 (Elaborate shafts)(Map 22)

The small number of Type B3 strap-ends, with elaborate shafts, have a wide distribution with no obvious spatial patterning.

7.4.4 Type 4 (Multi-headed)(Map 23)

Type B4 strap-ends, characterised by the use of animal masks on their shafts, have a distinctly northern distribution. All have been discovered in regions north of the Danelaw boundary, the most northerly findspot being Birsay, Orkney, though the densest concentration is associated with the counties of Lincs and N. Humb. Findspots further south are restricted to the East Anglian counties of Norfolk and Suffolk, while the sprinkling of findspots north of Yorks are sited in coastal regions into Anglian Scotland.

A breakdown of the type into constituent sub-types, based upon the number and configuration of animal masks, produces some interesting distributions. Findspots associated with Sub-type B4a strap-ends are dispersed along the eastern side of the country, though it is notable that the most crisply executed examples, such as those from Hurly Hawkin, Grampian, Scotland (cat. no. 1005), are found further north. Stylised examples are associated with more southerly locations in Norfolk and Suffolk. Sub-type B4b strap-ends, the least common of the type, are distributed within a forty kilometre radius of the Humber estuary. Sub-type B4c strap-ends, with a single head facing the split-end, have the most northerly distribution, not extending south of the coastal site of Meols, Cheshire (cat. no. 1013). Sub-type B4d strap-ends are the most widely dispersed, with findspots located on both the north-east and north-west coasts, including a cluster in East Anglia.

The distribution of B4 strap-ends supports their attribution as an Anglo-Scandinavian type, as suggested previously in Chapter 6 on stylistic grounds. Related examples have been discovered in Scandinavia, including an example from the site of Trelleborg in Denmark (Nørlund et al. 1948, pl. XXII, no. 1). Scandinavia has also produced artefacts which are closely related in the use of similar animal masks, including a strap-distributor from Västergötland, Sweden (Bersu & Wilson 1966, pl. XVIII, c). A Scandinavian association is also supported by the fact that those excavated derive from sites with a variety of evidence of Scandinavian influence,

activity and settlement. Sites fitting into this category include Birsay, Orkney (Curle 1982), Meols (Bu'lock 1960), York (MacGregor 1978), Cottam (Richards 1999), Norwich (Farwell 1993), Whithorn (Hill et al. 1997), and Carlisle (McCarthy pers. comm.).

With so few examples, it is difficult to be accurate as to which side of the North Sea represents the original source for this distinctive form of strap-end. The discovery of a further example from Dublin, however (Ruth Johnson pers. comm.), suggests that, like other contemporary Viking-age artefact types such as ringed-pins, these strap-ends were circulated widely in this sphere of the Viking world (Fanning 1994). The discovery of examples in the far north of Scotland and on the coasts of the Irish sea could suggest that the type was originally introduced by Norse Vikings and later adopted by Anglo-Scandinavian communities within the English Danelaw. This suggestion is also supported by the greater number of debased versions discovered in this region.

7.4.5 Type 5 (Interlace)(Map 23)

Type B5 strap-ends are exclusively distributed within the Danelaw, examples coming predominantly from sites located within the eastern counties of Yorks, Humb, Lincs and East Anglia. An isolated example has also been discovered on the west coast at Meols in Cheshire (cat. no. 1027). This pattern supports the interpretation based on stylistic grounds that they should be considered an Anglo-Scandinavian variety (Chapter 6).

Although less numerous than Type B4 strap-ends, a comparison of their distributions indicates that Type B5 is more likely to be associated with Danish settlement than Norse. This proposition is supported by the discovery of a closely related example from Aggersborg, Denmark (Fig. 6.6A) and the fact that the type is absent from Viking-age sites in areas of Norse settlement in the north and north west of England and Scotland.

7.4.6 Type 6 (Profiled heads)(Map 23)

Type B6 strap-ends, although few in number, have a defined southern distribution with the majority of examples deriving from the counties of Dorset, Hants and Kent. Two findspots represent more northerly locations, Colchester, Essex, and Barton-upon-Humber, S. Humb (cat. nos 1038 & 1041). In previous chapters, it has been argued that the profiled animal heads used on these strap-ends are influenced by the Ringerike and Urnes styles of Scandinavian art. On this basis, the distribution of this type of strap-end should be compared to that of other artefacts belonging to the same artistic and cultural traditions. In the case of the Ringerike style, most of the material, which encompasses various media, (Fuglesang 1980) has a distinctly southern distribution. This is, to some extent, a reflection of the importance of southern towns, such as London and Winchester, during the period of Danish rule in England during the first half of the 11th century. The distribution of Urnes-style metalwork is more widespread (see below), though there is an increasing number of discoveries being made in the south, such as the mount from Nonuch Park, Surrey (Williams 1997, no. 36, fig. 5).

7.4.7 Type 7 (Hooked)(see Map 23)

The number of strap-ends belonging to Type B7 are too few to draw any significant conclusions from a map of their distribution.

7.5 The distribution of Class C strap-ends (Map 24)

Class C has a dispersed distribution, though this is misleading considering its members are derived from only seven sites, with two thirds from the site of Hamwic alone. An additional four examples are from sites with evidence of Middle Saxon occupation in London. The remaining examples, all from excavations, are confined to the eastern half of the country, from Ipswich to Jarrow on the coast of T & W. In the case of the Hamwic finds, there is evidence attributing them to a source of

manufacture based somewhere within the settlement, especially in light of the impressive evidence for non-ferrous metalworking from various sites in the town (Hinton 1996a, 97). The comparative popularity of the class in Hamwic, in relation to other contemporary settlements, has led Hinton to suggest that they may reflect some fashion particular to the port (ibid., 102). The discovery of four examples from Lundenwic, however, suggests that their use was not confined to Hamwic and there is no reason why they could not have been manufactured there also. The delicacy and simplicity of this class of strap-end may influence their recovery and identification both as archaeological and detected finds, so that the distribution should perhaps be treated with caution.

7.6 The distribution of Class D strap-ends (see Map 25)

Although small in number, Class D has a defined distribution within the modern county of Lincs and S. Humb, corresponding to the former Anglo-Saxon kingdom of Lindsey. The only outliers are from the sites of Yarnton, Oxon, and Hamwic. On this distributional evidence, the northern group could be regarded as a product of a manufacturing centre based somewhere in the kingdom of Lindsey, though with so few finds, any attribution must remain tentative.

7.7 The distribution of Class E strap-ends (Map 26)

The overall distribution of tongue-shaped strap-ends (Class E) is more restricted than that of the other two most popular classes of strap-end, (A and B), though they are less numerous. The most northerly finds are associated with sites situated within the so-called 'Irish Sea province', on Man and mainland sites such as Carlisle. However, these belong to a specific type discussed below (Type E3). To the south, there are dense concentrations within the productive zone on the eastern side of the country, particularly within the counties of Yorks, Humb, Lincs and Norfolk. Finds from central and southern England are relatively dispersed in counties such as Herts and Cambs, though the number of finds increases further to the south in Hants, and west

into Dorset and Wilts. Additionally, there are small numbers to the south-east, especially in north Kent. The findspots associated with two examples from south Wales (cat. nos 1171 & 1226), which mark the western extremity of the distribution, were discussed earlier in the chapter (see Class A).

7.7.1 Type 1 (Winchester style)(Map 27)

Winchester-style strap-ends (Type E1) have a similar distributional range as the class as a whole, apart from a lack of finds from the region to the north west, which has already been mentioned as being associated with Type E3 strap-ends. Notable concentrations of finds cluster in Lincs, S. Humb, north Norfolk and Hants. Unlike Class A and B strap-ends, findspots north of the Humber are restricted to only a few sites, York in particular, where three examples have been discovered from stratified, archaeological contexts.

The comparatively wide distribution of Winchester-style strap-ends is significant in light of past interpretations of the origins and development of the style which concluded that it was essentially a southern or south-eastern phenomenon. Although Kendrick, for example, at the beginning of his work on Late Saxon and Viking-age art (1949), stressed that limited emphasis should be placed on Winchester, or Wessex, in this respect, he still considered the style's sphere of influence was predominantly southern (Kendrick 1949, 1). Similarly, Wilson referred to the chunky, inhabited vinescroll associated with a number of Winchester-style objects, including the fine strap-end from Winchester (cat. no. 1121), 'as a style of south-east England during the first half of the 10th century' (Wilson 1984, 160). The evidence provided by strap-ends and the discovery of other metalwork in the same tradition, is, to some extent, reaffirming Wessex, and most particularly Winchester's role in the development of the style, especially in relation to non-manuscript art (Hinton 1996b). The dispersed distribution in the counties of Hampshire, Wiltshire and Dorset, however, affirms Hinton's conviction that the mechanisms underlying the production and circulation of such artefacts precludes placing too much emphasis on there

having been a single, Winchester-style production centre (Hinton & Welch 1976, 215).

More compelling, in light of past discussion of the geographical influence of the style, is the number of Winchester style strap-ends from the east and north east of England. In fact, the distribution map reveals that there are more from these areas than from those considered to be from the traditional heartland of the style. Despite the distorting effects of metal detecting, the fact that Class E1 strap-ends from these regions reflect a considerable range in both quality and stylistic content (see Map*) suggests the existence of workshops and individuals thoroughly conversant with the style and its constituent motifs. On the basis of this evidence, certainly in relation to minor objects such as strap-ends, it is likely that the Winchester-style was more widely practised than hitherto thought.

7.7.2 Type 2 (Anthropomorphic)(Map 28)

The distribution of Type E2 strap-ends, apart from two examples from the south west - which are products of the same model (see below) - is confined within the Danelaw. More specifically, their findspots are concentrated in East Anglia, especially Norfolk, with nearly 65 per cent of the twenty-six representatives discovered from within this county.

Relief decorated Sub-types E2a, i and ii are exclusively distributed in the East Anglian region, apart from an outlier from York which may be an export. Unfortunately, the small number of finds under discussion reduces the possibility of assigning these examples to a workshop based in the region, despite the defined distribution.

The distribution of the open-work Sub-types E2b, i and ii are similarly restricted to the East Anglian region. All of the former are East Anglian finds, while examples of E2b, ii strap-ends have been discovered in Herts and Lincs.

Although represented by only two, almost identical finds, it is of significance that the E2b, iii examples were found either side of the Severn Estuary, from Winterbourne outside Bristol, and Moynash, close to the coast of South Glamorgan, Wales (cat. nos 1225-6, Fig. 3.27F & G). It is frustrating that there are not more discoveries to strengthen the case for a single manufacturing source based in this region. It is possible that they were originally a pair divided in antiquity, but if this is the case, the chance discovery of both is a huge coincidence.

7.7.3 Type 3 (Ribbed)(Map 29)

All findspots associated with Type E3 (ribbed) strap-ends are located within the Danelaw. Their distribution within this region is focused in two areas. The first extends along the eastern side of the country within the counties of Norfolk, Lincs and north of the Humber into N. Humb. One or two examples also penetrate south of this spread, into Suffolk and Herts. The second area is more defined, being restricted to two sites in the Irish Sea region: Carlisle (the single most productive site, having yielded four examples), and Peel Castle on the Isle of Man.

This distribution, together with related finds, suggest they are best interpreted as a distinctive Anglo-Scandinavian variety. The attribution is reinforced by the fact that the Irish sea group were all recovered from Viking graves, in each case with matching buckles (e.g. cat. no. 1229, Fig. 3.28A). Two examples have also been discovered in Scandinavia: from a Viking grave at By, Kleabu, Sør-Trondelag, in western Norway, and a second from a Vendel to Viking-age cemetery near Kalmar in Sweden (ibid.). The discovery of an example at Domburg in Holland suggests that the type could have originated on the Carolingian continent, their adoption in this country being related to Viking settlement and activity (Fig. 6.7A).

7.7.4 Type 4 (Borre-style)(Map 29)

The distribution of Type E4 strap-ends is similarly restricted to the Danelaw, though this is to be expected in light of the fact they are identified by their Scandinavian, Borre-style decoration. The spread ranges from Herts in the south, northwards through East Anglia and Lincs into Yorks. An additional find comes from an unpublished Viking grave from St Michael's churchyard, Workington, on the coast of Cumbria (cat. no. 1249). Although outside the survey area, it should be noted that an example has also been discovered in Dublin (Lang 1988, fig. 122; NMI E190:5327). One should also consider the use of related Borre-style decoration on Insular Class F strap-ends, which have a defined Irish sea distribution (see below).

Sub-type E4b, characterised by its vertebral ring-chain motif, has the widest distribution including three from north of the Wash. Notable is the popularity of this motif on Viking-age sculpture, especially in North Yorks, Northumbria, Cumbria and on the Isle of Man (Bailey 1980, 216). Sub-types E4a and c have more southerly distributions, discoveries of the former being restricted to Norfolk, and of the latter to Norfolk and Herts. There is a good case for assigning these strap-ends and related artefacts, including a series of contemporary Borre-style disc-brooches, to an East Anglian source of manufacture. The uniformity of the brooch series, together with the prominence of Norwich on a distribution map of the finds, suggests that the town was a likely location for a production centre specialising in their manufacture during the 10th century (Richardson 1993, 31; Margeson 1997, 23).

7.7.5 Type 5 (Other Scandinavian designs)(Map 30)

Strap-ends decorated with debased Urnes-style decoration (Type E5) have a wide distribution extending from Kent and Hants in the south, to N. Humb in the north. The most notable concentration is again in East Anglia, especially Norfolk. The distribution of Urnes-style metalwork is discussed in detail elsewhere (see Type B5

and Class G), suffice to say that the dispersed distribution associated with the type mirrors that of Urnes-style metalwork in general in England.

7.7.6 Type 6 (Carolingian)(Map 30)

The wide geographical range covered by findspots of Carolingian-type tongue-shaped strap-ends (Type E6) reflects both direct and indirect contacts with the Continent from the late 9th century onwards. Those from Balladoole on the Isle of Man and Aspatria, Cumbria (now lost) (cat. nos 1280-1 & 1279), were discovered in Viking graves and it is possible that some of the metal-detected examples discovered in the Danelaw represent a similar source. Examples from urban settlements such as London and York could well reflect direct trading contacts with Europe during the 10th century (cat. nos 1286 & 1296). Others may be English copies of the Continental examples in circulation (see Fig. 3.7), especially taking into consideration that Carolingian and Ottonian strap-ends represent the original inspiration for the tongue-shaped form adopted in this country during the 10th century (Wamers 1986, 36-40).

The distribution of Type E6 strap-ends should be compared to that of other artefacts considered to be of Continental Carolingian manufacture and influence discovered in England. This includes unique objects such as the fine silver-gilt mount from Wareham, Dorset (Webster in Webster & Backhouse 1991, cat no. 256) and other dress-accessories, most notable being the series of equal-armed or 'caterpillar' brooches. This distinctive form of brooch, with a long period of usage stretching from the 6th to 11th centuries, has been found on numerous English sites, especially those with access to the Channel and North Sea enabling direct contact with the Continent (Vince 1992, 143; Hinton 1996a, 3). Significantly, two examples come from excavations in York and London, previously noted as having also produced strap-ends which either represent Carolingian imports or likely copies of imports. It remains to be answered whether such strap-ends may, in some cases, reflect the existence of Continental ethnic minorities living within English towns (as proposed

for the two brooches from York (Roesdahl et al. 1981, 126)). The wider distribution of Carolingian strap-ends in comparison to the brooch-type is to be expected in light of the fact that the latter would have represented an alien form of dress-accessory never widely adopted by the Anglo-Saxon populace.

7.8 The distribution of Class F strap-ends (Map 31)

The distribution of the thirteen strap-ends belonging to Class F supports their attribution as an Insular form, which was argued in Chapter 6 to have originated in Ireland. Although outside the survey area, it is worth highlighting the distribution and occurrence of the variety within Ireland itself. Isolated finds have been discovered from the interior of Ireland from sites like Dunbel, near Kilkenny (Crawford 1923, 151, fig. 8); however, the greatest concentration comes from excavations in Dublin, where several have been recovered from 10th-century habitation contexts (e.g. Lang 1988, fig. 118; Wallace & O'Floinn 1988, 18). On this basis, there is a strong likelihood that Dublin was the centre for their production. Within the confines of the survey area, the distribution of findspots from Irish Sea and Hebridean sites such as Man, Colonsay, North Uist, and Skye, reinforces an Insular attribution. This is further strengthened by a comparison with the distribution of a series of copper-alloy bridle-mounts mounts (e.g. Bersu & Wilson 1966, pls V, VI, VII), which, judging from technical and ornamental parallels, belongs to the same tradition (see Chapter 6). The stylistic and contextual association of many members of this class with Viking activity provides the most likely context and explanation for their wide dispersal in the Irish Sea region.

Viking involvement may also be responsible for their presence on the other side of northern Britain in the eastern Danelaw. In this region, examples have been discovered from the counties of Yorks and Lincs, with findspots extending south into Norfolk and Suffolk. It is interesting, that, when both types are plotted, findspots associated with Type F2, characterised by unperforated roundels, represent the southern limits of the distribution. It is possible that these represent copies of Insular

strap-ends manufactured within the Danelaw, the original purpose or significance of the perforated roundel being lost or misinterpreted. This attribution is unquestionably the case for the Norwich example (cat. no. 1310, Fig. 3.31F), which is decorated with an eclectic fusion of Anglo-Saxon Trewhiddle-style motifs and a roundel occupied by an Insular-type knotwork design.

This interesting distribution should be compared with that of other contemporary Insular artefacts, such as the miniature bells discovered on Danelaw sites - including Cottam on the Yorkshire Wolds (Batey 1988; Haldenby 1990, fig. 6.1). These artefacts are testament to the cultural links that existed between the various Scandinavian communities occupying England at the time. During the 10th century, there is ample historical evidence for the activity of Hiberno-Norse Vikings in the Danelaw, perhaps the most historically significant event being Ragnald's capture of York in 919 (Higham 1992, 24).

7.9 The distribution of Class G strap-ends (Map 32)

With only nine representatives, no firm conclusions can be derived from the distribution of Class G Urnes-style strap-ends. A distinct cluster of six examples derives from Lincs and S. Humb, the remaining four being of various locations, including three from the eastern Danelaw from Doncaster, S. Yorks, Norwich, and Great Mundon, Herts, with an isolated outlier from Freswick Links, Caithness. The distribution of Class G strap-ends can be compared with the discovery of other Urnes-style metalwork in the Danelaw. Former interpretations concerning the style's sphere of influence, which stressed this Danelaw bias (see Owen & Trett 1980, 354; Backhouse et al. 1984, 111) should, however, be modified as a result of more recent metal-detector finds, especially those encapsulated within Williams' recent survey of stirrup-strap mounts (1997). His Type 10 sub-triangular mounts depicting a coiled animal, which comprise most of the mounts reflecting Urnes-style influence (Williams 1997, 53), have a fairly dispersed distribution - with a notable concentration in southern England (ibid., fig. 14).

As to the Scottish find (cat. no. 1314), at the time of compiling her catalogue of Urnes-style artefacts from England, Owen commented that this represented the only English Urnes-style object from Scotland (Owen 1979, 255). However, the Freswick find has since been recognised as an example of a distinctive Scandinavian form of strap-end, with close parallels from Sweden and Gotland (Fig. 6.6F, O'Meadhra 1993, 436). Strictly speaking then, this find should not be considered alongside the English Urnes-style strap-ends, although it, and the Scandinavian series, clearly provided the inspiration for their distinctive form.

7.10 The distribution of Class H strap-ends (Map 33)

Class H strap-ends are too disparate to base any significant conclusions on a study of their distribution.

7.11 The distribution of Class I strap-ends (Map 33)

Representatives of Class I, numbering only six, are also too few to allow any detailed comments on their distribution. Two come from the southern and central counties of Wilts and Beds, the remaining four all being Lincs finds.

7.12 The distribution of Class J strap-ends (Map 33)

Interpretation of the distribution of Class J (folded) strap-ends is hampered by the fact that the pattern is as much a reflection of recognition as it is of deposition. It was noted in Chapter 3 that examples recorded in the survey were restricted to those from dated archaeological contexts, since the simplicity of their form suggests that they potentially have been very long lived. With such a universal form, one should not expect regional patterning to any degree. What is interesting is the number of finds from individual sites, nine from Flixborough, S. Humb, and three from Hamwic. It is highly likely, considering their ease of fabrication, that these artefacts

were made on location, as and when required. The influence of the eastern side of the country is again reflected in a distribution of the class, with a notable concentration within the counties of Norfolk, Lincs and Humb. Isolated findspots include the Beeston Tor, Staffs, example (cat. no. 1342) and another from Wing in Bucks (cat. no. 1336). Excavation of Mid-Late Saxon occupation deposits in Southampton and Canterbury has produced three a piece.

7.13 General conclusions

Analysis and interpretation of the distribution of Late Saxon and Viking-age strap-ends has highlighted the problems in interpreting their original patterns of circulation and use. Although it has been acknowledged that mechanisms for their discovery and identification have a significant influence on the recovery of the true archaeological distribution of these artefacts, the substantial database, derived from a full range of sources, has maximised the potential of the analysis encapsulated in this chapter.

The major results of this distributional analysis are as follows. Some of the most popular classes of strap-end are associated with widespread distributions, most notably Classes A and B, and to a lesser extent Class E. Although these reflect the overall popularity of these forms, they mask the more closely defined distributions associated with the internal classification of these classes based upon stylistic attributes. The distribution of Class A strap-ends was found to be the most widespread, as were some of the decorative types and smaller groups associated with the class, especially those associated with Types A1 and A2. This distribution was found to reflect the extent of Anglo-Saxon settlement during the 9th century, the limited numbers from Wales and northern Scotland being the result of either Viking activity or else limited contact, in some cases relating to commercial activity on coastal trading sites such as Stevenston Sands, Strathclyde. Class B strap-ends carrying transverse incisions and Class E Winchester-style strap-ends are also characterised by fairly widespread distributions.

Narrowing the focus of analysis in some cases revealed more closely defined patterns underlying the general distribution of overall classes and types. In some instances, localised distributions were found to be associated with highly homogeneous groups (e.g. A1a, xvii and xviii), or in other cases, the geographical spread encompassed strap-ends displaying increased stylistic and morphological diversity (Type A5). It is likely that these reflect the differing levels of craft specialisation and centralisation associated with their production in certain regions, aspects discussed in more detail in the following chapter.

In other cases, the distribution of specific classes or types of strap-end may equate to spheres of cultural and/or ethnic contact. This is almost certainly the case with those strap-ends interpreted as Anglo-Scandinavian morphological types with decoration influenced by foreign Scandinavian artistic traditions. It should be stressed that most of this material represents a hybrid Anglo-Scandinavian cultural tradition, despite the few strap-ends interpreted as representing actual Scandinavian imports, such as the Type E4 strap-end from Great Walsingham, Norfolk (Richardson 1993, 15-17) and the Class G Urnes-style strap-end from Freswick Links, Caithness (O'Meadhra 1993, 436). Mention should also be made of Type E6 strap-ends in this respect, as some could also represent continental Carolingian imports, though their presence in certain depositional contexts and geographical areas has also been explained by reference to Viking activity.

Types B4, B5, E3, E4 and Class F strap-ends were argued on the basis of their morphology and decoration to represent Scandinavian or hybrid Anglo-Scandinavian forms. This attribution was supported by distributional analysis which revealed that their findspots were concentrated in regions interpreted as having been most affected by Scandinavian activity and settlement. The distribution of B4 and B5 strap-ends, for example, is restricted to the Danelaw and other regions of Norse and Hiberno-Norse contact in Scotland and north-west England. The same was also found to be the case for E3 and E4 strap-ends.

In some cases, the contrasting distributions associated with these Anglo-Scandinavian forms allows one to deduce a more specific association with either Norse or Danish activity. The occurrence of B4 and E3 strap-ends in northern Scotland and the Irish Sea region strongly suggests an association with Norse and/or Hiberno-Norse settlement of these areas. Conversely, some Anglo-Scandinavian strap-ends have distributions restricted to the Danelaw in counties such as Norfolk and Lincolnshire, as in the case of the majority of Type E4 Borre-style strap-ends. These finds contribute to the increasing body of metal-detected Anglo-Scandinavian material from the Danelaw which is influencing recent interpretations on the nature and scale of Scandinavian settlement in England (Richardson 1993, 37, 41, 179; Margeson 1996; 1997).

The distribution of Class F strap-ends provides a cautionary lesson in attempting to interpret ethnic identity on the basis of patterns of artefactual deposition. The spread of these Insular strap-ends in the Irish Sea region suggests Norse adoption of an artefact which had its roots in a native Insular Irish milieu. This relationship is also demonstrated by their occurrence in Viking graves, and by stylistic analysis revealing the occasional replacement of Insular motifs by Scandinavian Borre-style decoration. Matters are complicated, however, by the occurrence of examples in the Danelaw which, on closer analysis, suggest that they were not only circulated in this region, but also emulated by local craftspeople. This example illustrates the widespread influence of certain cultural traditions on contemporary material culture and also the potential links existing between the various Scandinavian communities inhabiting these shores. Ultimately, these widespread distributions frustrate attempts at pinpointing the original source and principle zones of manufacture for these Anglo-Scandinavian forms of strap-end, especially in light of the dearth of excavated evidence for production.

The remaining strap-ends representing products of a mixed Anglo-Scandinavian cultural milieu are associated with the period of Danish rule in England during the

11th century. Correspondingly, Type B6 and Class G strap-ends, which demonstrate the influence of contemporary Scandinavian Ringerike and Urnes-style artistic traditions, have distributions reflecting changes in the political and cultural map of England. Southern finds, in accordance with the distribution of other metalwork belonging to this tradition, reflect the importance of towns such as Winchester and London as political and cultural centres. Despite the increased prominence of the south, however, the distribution of these strap-ends and related artefacts points to the continued importance of the Danelaw as a centre for the circulation, if not the production, of Anglo-Scandinavian metalwork into the 11th century.

More surprising, in light of past art-historical interpretation, is the fact that a similar pattern is also reflected in the distribution of Winchester-style strap-ends (Type E1). This evidence contributes to a re-evaluation of the style's sphere of influence, which can now no longer be exclusively associated with the south and south east of England. In addition, the distinct probability that these regions of the Danelaw were supporting local craftspeople and workshops specialising in the style provides a new interpretative slant for investigating the nature and level of cultural assimilation associated with Scandinavian settlement.

CHAPTER 8: SOME REFLECTIONS

The following discussion draws together the results of the analyses presented in earlier chapters to explore some general themes and contexts underlying the production and use of strap-ends. Central to the discussion is an exploration of the likely function/s of these artefacts, a problematic issue in the Middle Saxon period when grave contexts are so few. In light of this caveat the full range of evidence is considered, ranging from contemporary sources to present-day depositional contexts and ultimately scrutiny of the artefacts themselves as a means to uncover their original function. The period encompassed by this survey coincides with some important developments in the technology and production of Mid/Late Saxon artefacts. The second section draws upon the information presented in earlier chapters to assess the nature and scale of strap-end production and to what extent such changes are evident in the analysis of this particular class of artefact.

8.1 Function

As an introduction, a summary of past interpretations on the function of Late Saxon strap-ends is given, though the majority specifically refer to the ubiquitous Class A variety. 19th-century theories pertaining to the possible uses of these objects were varied. Cuming described the strap-end from Halstock, Dorset, as 'a portion of a hook once riveted to the end of a narrow belt for the support of some implement or ornament' (Cuming 1868, 215), and Roach Smith the example from Richborough, Kent, as a pendant end of a belt (Smith 1850, 88). In other cases scholars were less committal, Hume, for example, simply described the example from Meols, Cheshire, as an 'ornamental tag' (1863, 198).

The first real shift in the interpretation of these objects' function came with Peers & Radford's discussion of the Whitby series in which they stated that 'they should be disassociated from the normal type of strap-end which forms part of the costume' (1943, 56). This conclusion was based upon the then presumed association of these

objects with ecclesiastical contexts and the view that their flimsy design would have been better suited to attachment to silk-ribbon bookmarks. Accordingly they were discussed under the section on 'Objects of ecclesiastical or liturgical use' not 'Objects of personal use or adornment'.

Later, in his discussion of the Trewhiddle strap-ends, Wilson (in Wilson & Blunt 1961, 97), was to refocus attention on the hypothesis that strap-ends functioned as items of personal dress, more specifically as girdle-ends, a theory reiterated in his publication on Late Saxon ornamental metalwork in the British Museum (1964a, 63). This interpretation was partly based upon the diversity of the findspots associated with his appendix of 80 or so strap-ends which invalidated the earlier suggestion that they were exclusive to ecclesiastical sites. He proposed, by comparison with similarly delicate buckles and matching belt-sets from Scandinavia, that their most common application would have been as ornamental terminals to textile or cloth waist-belts.

More recently scholars have been less willing to ascribe a single prevalent use and instead highlight the likely multi-functional nature of these artefacts (1982a, 148). Graham-Campbell has suggested that smaller Class A strap-ends were more likely to have been used in association with textile belts and ribbons, affording the dual service of providing weight to make them hang attractively and protecting their ends from fraying. He argued that larger strap-ends, such as a Class E example from Winchester (cat. no. 1121), were more likely to have been attached to leather belts and straps thus preventing the ends from curling (ibid., 182).

Both Webster and MacGregor have been more explicit about the range of functional contexts with which strap-ends were associated, amongst those listed being waist-belts, sword-belts and harness-fittings and purse or satchel-fittings (Webster in Webster & Backhouse 1991, 233; MacGregor 1994, 126). The latter suggestion is based upon their discovery in pairs and the large numbers discovered at certain

productive sites interpreted as markets or fairs, although pairs would also be required for use as girdle-ends.

What additional evidence can one bring to bear in assessing the function of these artefacts? Especially given that the majority of past interpretations appear to have been based upon conjecture rather than methodological argument. In pursuit of this question a range of sources will be evaluated including, contemporary descriptions/representations, contexts of deposition, and a study of the objects themselves.

8.1.1 Contemporary sources

Unfortunately being minor items of dress, strap-ends are rarely, if ever mentioned or depicted in contemporary Anglo-Saxon sources. Although Old English encapsulated a range of synonyms describing contemporary dress (Owen-Crocker 1986, 3, appendix), there is no evidence for a word that exclusively refers to a strap-end. This may be the result of the fact that strap-ends associated with the girdle were simply described under the general Old English words for a belt, i.e. *belt, fetel, fetels, gyrdel, gyrdels*, or even under the name *gyrdel-hring/gyrdels-hringe* which refers to a belt buckle (Owen-Crocker 1986, 208).

Anglo-Saxon manuscripts are also of little use in establishing the original function of strap-ends, mainly due to the fact, as Wilson points out, that 'the dress illustrated in the manuscripts of the Late Saxon period is stylised and mainly of ecclesiastical character' (Wilson in Wilson & Blunt 1961, 98). The closest representations of a strap-end in the corpus of Anglo-Saxon manuscripts are the square terminals to decorative cloak-fastenings, as depicted in the Stowe MS 944 (in Owen-Crocker 1986, fig. 152), and garters as on folio 24 of The Benedictional of St Aethelwold., both produced during the 10th century (Temple 1976). These are, however, closer in detail to the tassels on representations of cleric's stoles, as for example those worn by the two saints on folio 18 of the mid-11th-century Tiberius Psalter (Temple 1976).

Widening the search to encompass continental Carolingian manuscripts produces more valuable evidence (Mitchell 1994, 133-7). Strap-ends clearly related to the Class E form appear on sword-belts belonging to warriors depicted in mid to late 9th-century Carolingian manuscripts (Fig. 8.1). These include: the Vivian Bible representations of King David and Charles the Bald (Fig. 8.1A; Paris Bibl. Nat., Ms. Lat. 1, fols. 215v and 423r), the image of Lothar in the Gospels of Lothar (Paris Bibl. Nat. Lat. 266, fol. 1v) (Hubert et al. 1970, pls 133), the picture of the Judgement of Solomon in the Bible of Charles the Bald (Fol. 185v)(Müthericheé & Gaedhe 1977, pl. 44), as well as sword-bearers accompanying depictions of Charles the Bald in his Golden Gospels (Fig. 8.1B) and his Bible (Rome, San Paolo fuori le mura, fol 1r) (Hubert et al. 1970, pls 137 & 130).

From this evidence it would appear that one functional context associated with Class E strap-ends was, in association with trefoil and oval mounts, fittings for sword-belts. Thus one can be reasonably confident in ascribing this function to those strap-ends belonging to extant sets of such fittings from the continent, including the set contained within the Viking hoard from Östra Påboda, Småland, Sweden (Fig. 6.7D), and that discovered during excavations at San Vincenzo al Volturno, Molise, Italy (Mitchell 1994).

The obvious problem with such limited evidence is that it only highlights a single functional context associated with certain Class E strap-ends. With the lack of contemporary Anglo-Saxon representations there is no way of knowing whether these tongue-shaped strap-ends were put to a more specialised range of uses than their Anglo-Saxon predecessors. This may, however, be more likely given the vast reduction in the numbers of 10th-century strap-ends, as noted in previous chapters.

8.1.2 Contexts of discovery as a reflection of contemporary use

The following section evaluates the evidence provided by strap-ends from archaeological contexts to assess the range of functions with which they were associated.

a) Hoards

It is of significance that five pairs of strap-ends have been discovered in hoards (see Table 6.1). These include; the Class A and unornamented Class L examples from Trewhiddle, Cornwall; two silver Class A pairs from Lilla Howe, N. Yorks and a further Class A duo from the Pictish hoard of Rogart, Sutherland, Scotland. The plain silver pair from the Trewhiddle hoard, which is unparalleled elsewhere in the corpus, was accompanied by a pair of strap-slides (Wilson in Wilson & Blunt 1961, 84-5, 98) and is considered below.

The importance of the Class A hoard examples lies in their demonstration of the fact that at least some members of this ubiquitous class were worn together in pairs. It is uncertain, given the fact that the majority of Class A strap-ends represent stray losses, whether pairs were prevalent or only used in specific functional contexts. Sets of matching strap-ends are occasionally discovered by metal-detectorists however, including the fine silver pairs from Ipsden Heath, Oxon (cat. no. 430), West Rudham, Norfolk (cat. no. 328), and the trio from Ashill, Norfolk (cat. no. 426). Considering the extreme improbability of both members of a duo being lost simultaneously one cannot discount the possibility that most strap-ends of this period were worn together in pairs or sets.

If this attribution is accepted what are the consequences for establishing the likely functions of their attendant belts/straps? It certainly does not discount the possibility of their primary function being as girdle-ends, defined as a waist belt that is simply tied rather than fastened using a buckle. This suggestion is supported by the fact that

buckles are a comparative rarity in the archaeological record after the beginning of the 8th century, (though see below), their function presumably being replaced by other methods of fastening. This trend may be traced back even further into the 7th century when both the small size and frequent absence of buckles in graves (outside Kent) indicate that finer woven girdles were replacing more robust leather belts (Owen-Crocker 1986, 100). This change in fashion should be borne in mind when considering the flimsy nature of the majority of Class A strap-ends, as below.

The existence of pairs does not, however, preclude their use in a variety of other functional contexts also. It was during the discussion of the pair of strap-ends from Ipsden Heath, Oxon, that MacGregor suggested that one of their functions could have been on the fastening straps belonging to purses or shoulder-bags (MacGregor 1994, 126). Equally, pairs are consonant with their use as garter tags as hinted at in later Anglo-Saxon manuscripts (Owen-Crocker 1986, 167).

b) Graves

Pagan Viking burials provide the main body of evidence in light of the considerable scarcity of grave goods in Late-Saxon graves. These in turn may be compared to Viking graves in Scandinavia. Because of this fact there is a chronological bias towards those classes of strap-end that were current from the 9th century onward and to those forms commonly found in Viking contexts, i.e. Carolingian strap-ends.

Exceptions include a single Class A strap-end from one of the 9th-century burials comprising the Late Anglo-Saxon cemetery at Bedhampton, Hants (cat. no. 196), though unfortunately there is no record of it being associated with a particular region of the skeleton (Webster & Cherry 1975, 222). Similarly there is no detailed positional information associated with the three Class A examples discovered in Viking graves; a pair from one of the female Viking burials at Westness, Rousay, Orkney (cat. nos 615-6)) and a singleton from Østebø, Rogaland, Norway (Appendix 2; Bakka 1963, 40). Although the quality and quantity of the grave evidence is poor

for assessing the function of Class A strap-ends, the Westness burial does at least provide a further context for their use in pairs.

It is difficult to be sure what uses Anglo-Saxon strap-ends were put to, if any, in these secondary Viking contexts. Some may have been included purely as booty, others were undoubtedly adapted to other uses, such as an Insular Class F example from Cronk Moar, Isle of Man (cat. no. 1302), which, together with a strap-distributor, acted as a baldric fitting (Bersu & Wilson 1966, 76).

Moving forward in time mention should also be made of the Class E1 strap-ends discovered in burials at the Old Minster, Winchester, and Wilbury Hill, Herts (cat. nos 1121 & 1124). Unfortunately, the former was recovered from a disturbed secondary grave-fill so could well be an intrusive object. Other grave-goods recovered from burials in the vicinity of the Old Minster, however, including a pair of silver hooked tags discovered below the knees of an individual, increase the likelihood that this strap-end was buried with the deceased as a component of his or her dress (Hinton 1990a, 34).

An account of the excavation of the barrow at Wilbury Hill, Herts, records that the strap-end was located in the middle region of the skeleton (Fox 1923, 266, pl. XXXIII, quoting Evans 1892, 257) suggesting that it was likely to have been associated with a belt secured around the waist.

An evaluation of the primary body of evidence in the form of Class E examples from Viking graves in Britain and Scandinavia highlights two or possibly three main functional contexts. Larger Class E strap-ends were often worn in conjunction with matching buckles for belts fastened around the waist. In graves at Peel Castle on the Isle of Man and the Cathedral Green, Carlisle (cat. no. 1229, Fig. 3.28A), for example, the position of the buckles and strap-ends on the skeleton indicates that the latter hung down some distance below the waist to knee level (Graham-Campbell forthcoming; McCarthy pers. comm.). It is most likely that other, similarly sized

buckle/strap-end suites discovered in disturbed or poorly recorded Viking graves served a similar purpose, including those at Aspatria, Cumbria (cat. no. 1275), and Balladoole on the Isle of Man (Bersu & Wilson 1966, 7). This is also the function attributed to the several sets of matching buckles and strap-ends discovered in Scandinavian graves, including the series from Birka in Sweden (Arbman 1940, taf. 86 & 87).

The second functional context is indicated by smaller tongue-shaped strap-ends discovered in association with matching buckles and strap-slides. Pairs of these matching sets come from burials at the Cathedral Green, Carlisle (cat. nos 1227-9), and Balladoole on the Isle of Man (cat. no. 1281, Fig. 3.30D), not forgetting the silver duo from the Trewhiddle hoard (cat. no. 1366), though these lack separate buckles. The Balladoole burial provides a context for the direct association of these strap-fittings with spurs, though later disturbance had moved the objects from their original positions. In the words of the authors ' the spurs were lying close together but the buckles and strap-ends of the spur-straps were no longer in their original positions. If the right leg had shifted northwards during settlement after burial, it is possible both the spurs and straps were worn by the man when he was placed in the grave' (Bersu & Wilson 1966, 7).

A similar pair of tinned iron buckles and strap-slides from 16-22 Coppergate, York, was discovered in association with iron spurs though in this instance without strap-ends (Ottaway 1992, no. 3832).

In the case of the Carlisle burial, however, which was of an unmounted Viking warrior/individual, it is likely that these small buckle sets served a different function. On comparison with a pair from a Viking grave at Lejre, Sjaelland, Denmark, which were placed just below the knees of the skeleton, the most likely interpretation is that they fastened boot straps or garter bands (Graham-Campbell 1980, cat. no. 189). Unfortunately, in the case of the English interment, the lower section of the burial was truncated by a later burial.

To summarise, the evidence provided by burials is heavily biased towards Class E strap-ends. Only four Class A strap-ends have been positively identified as grave goods. The burial at Westness is the only one to have preserved a pair - those from Bedhapton, Hants, and Østebø, Norway, being singletons. Unfortunately, one cannot be precise about their function as none is accompanied by detailed information recording their original findspots on the skeleton. Evidence for the Class E variety is more forthcoming, several having been discovered in Viking graves in this country and the Continent. Evidence suggests that, in such contexts, they were mostly used in conjunction with buckles and sometimes belt-slides. Larger versions with matching buckles were used on waist belts, and smaller ones, with buckles and occasionally slides, on lighter straps associated with spurs, garters or boots.

8.1.3 Site contexts

Strap-ends have been discovered on a spectrum of Late Saxon and Viking-age sites (see Table 8.1). Although the exact nature and function of some of these sites is still inadequately understood, it is clear from the excavated evidence that strap-ends were in use on settlements of varying status, from rural farmsteads through to monastic and secular high-status establishments and urban centres. Obviously such widespread use cannot reveal much about their exact function; had they continued to be discovered exclusively on ecclesiastical sites, following the excavations of Whitby, a specific liturgical use could then have been postulated. Instead, any functional interpretation must confront the diversity of site contexts.

Chapter 4 introduced the problem of establishing any relationships between the use of strap-ends and sites categorised by a specific status or function. Taking again the example of the 'monastic' site of Whitby, there is a strong likelihood considering its 160 coins that it was also a focus for secular trading. The relative safety and protection afforded by such religious sites attracted commercial activity in the form of markets and fairs as evidenced at ecclesiastical centres elsewhere in north-west Europe such as Armagh (Edwards 1991, 97) and St-Denis, which held one of the

most important fairs in early medieval Europe (Hodges 1982, 43; see also Blair 1992). As a consequence, one should be wary of assigning an overtly 'liturgical' function to artefacts discovered on historically documented monastic sites, let alone

SITE TYPES	Strap-end total
Wics	
Eorforwic (York)	16
Gipeswic (Ipswich)	17
Hamwic (Southampton)	37
Lundenwic (London)	10
Monastic sites	
Hartlepool, Cleveland	2
Jarrow, T & W	3
North Elmham, Norfolk	4
Repton, Derbs	4
Whitby, N. Yorks	15
Whithorn, Dumfries & Galloway	3
Other excavated high-status sites	
Cheddar, Somerset	6
Flixborough, S. Humb	28
Thwing, N. Humb	9
Productive sites	
Barham, Suffolk	6
Bawsey, Norfolk	32
Bidford-upon-Avon, Warks	8
Cottam, N. Humb	32
Harling, Norfolk	8
Royston, Herts	27
South Newbald, N. Humb	28
Beach sites	
Glenluce Sands, Dumfries & Galloway	3
Meols, Cheshire	9

Table 8.1: Breakdown of strap-end totals for sites categorised by status/function

those such as Brandon, Suffolk, and Flixborough, S. Humb, sometimes tentatively attributed such a status on archaeological grounds alone (Carr, Tester & Murphy 1988, 376-7; Leahy 1991, 95). Unfortunately, in almost all instances it is impossible to derive functional data from a more detailed analysis of find locations from intra-site assemblages, apart from specialised depositional contexts such as graves. Obtaining this kind of information is reliant upon being able to identify varying functional zones on individual sites, and is thus only applicable to larger sites such as *wics*. One must also account for the fact that the majority of strap-ends from excavated assemblages are likely to represent random losses and often come from residual contexts.

8.1.4 Strap-ends and 'Productive sites'

An archaeological relationship worthy of exploration in respect to strap-end usage is that of the large number of strap-ends discovered on so-called 'productive sites' (see above). The count at some sites, such as Cottam, Newbald, N. Humb, Royston, Herts, and Bawsey, Norfolk, not only equals, but exceeds the numbers discovered from contemporary urban contexts (see Table 8.1).

Due to a lack of excavation at some of these sites, however, explaining this relationship is a task fraught with ambiguity. The catch-all term used for convenience to describe sites that are 'productive' in terms of their scatters of metalwork and coinage may, in all probability belie a whole range of settlements/foci associated with varying status and functions (see Richards 1999). Despite this caveat, a fuller understanding of the relationship between artefact category and site context may be achieved by a more detailed investigation of the individual sites themselves, especially those that have been subject to limited archaeological investigation.

Excavation has revealed that some of the sites listed under the heading 'productive' are associated with archaeological evidence indicative of permanent domestic

occupation. The most spectacular of these sites in terms of archaeological remains is Flixborough, S. Humb, excavated between 1989 and 1991 (Leahy 1991; Loveluck 1998). Here, excavation revealed the complete or partial remains of over 30 buildings, often re-using single building plots, as well as boundaries and other structural features, including metalled pathways, constructed during a 400 year period from the 7th to the 11th centuries. The site has produced a spectacular array of artefactual evidence, not least a fine selection of high-status ornamental metalwork (Leahy 1991, cat. no. 69) as well as several objects indicating literacy, including a total of 16 styli. Many of the artefacts recovered relate to craft and industrial activities including textile manufacture, leatherworking, bone-working, iron-working and non-ferrous metalworking. Meanwhile, artefactual evidence in the form of imported pottery and coinage also reveals that the settlement was 'integrated within exchange networks with other parts of England and continental Europe' (Loveluck 1998, 157). The most recent interpretation of this evidence challenges the accepted view that Flixborough was principally a monastic site (Leahy 1991) and instead proposes that the settlement may have changed between a high-status secular residence and a monastic community during its lifetime (Loveluck, 158-60).

Ongoing excavations at Cottam on the Yorkshire Wolds have, to date, sampled both the Anglian and later Anglo-Scandinavian foci (see above; Richards 1993; 1995; 1999). Unfortunately, due to plough damage, structural remains were severely truncated and occupational deposits only survived in negative features such as ditches and pits.

In spite of this, rectangular structures such as post-hole buildings, and the base of a corn-drying oven, suggest that the occupation in the former 'was of a domestic nature and persisted for some considerable time, albeit with localised shifts'. This is supported by the artefactual assemblage from the excavations and metal detecting. Overtly domestic finds recovered during excavation include a ceramic lamp base, chalk weight, and a significant faunal assemblage. Meanwhile, surface prospecting recovered over 40 iron knives, spindle whorls, whetstones, axes and quern-stones.

Excavation of the later settlement revealed an elaborate entranceway, as well as track-ways and internal enclosures defined by shallow ditches. Habitation and industrial activity was indicated by post-built structures and features which yielded large quantities of fuel ash and slag.

A comparison of the artefactual assemblages from each settlement highlighted changes in the range of activities and external contacts associated with their inhabitants. Unlike the Anglian focus which was aceramic, the presence of Torksey- and Maxey-type wares suggests that the 10th-century settlement was participating in wider or new regional trading networks. Somewhat surprising in view of this was its comparative lack of coins, the majority having been discovered during excavation and detecting in the vicinity of its predecessor. Another notable difference was the scarcity of animal bone from the Anglo-Scandinavian site. Whatever the precise nature and mechanisms underlying changes in the function and economy of Cottam, it is clear that the site was home to a self-sufficient community, and a high-status one at that, judging by the quantity and quality of much of the metalwork (see Haldenby 1990; 1992; 1994).

Middle-Saxon activity at Thwing, N. Humb, focused on the site of a prehistoric henge monument (Manby 1987). Excavation has revealed evidence for the intensive use of the site over a 250-year period including timber buildings, many with ovens, a road, a cemetery and possible church, and external enclosures, one of which housed an unusual structure built upon concentric foundations. The artefactual assemblage reflected domestic and industrial activity in the form of a large faunal assemblage, spindle-whorls and loom-weights, as well as external trade, indicated by coins, Torksey-ware pottery and galena ore. Again, this excavated evidence points toward a permanently settled populace with a high-status contingent. Hall has suggested, no doubt due to the site's prominence in the landscape, that Thwing may represent a pragmatic attempt at establishing a meeting place which attracted trading and industrial activity (Hall 1994, 35).

The site at Bawsey, Norfolk, which has been intensively detected over the years, has recently been subject to limited archaeological investigation as part of a televised TimeTeam excavation (September 1998). The prominent hill-top location, which in Middle Saxon times would have been an island, had an encircling ditch and has produced a wealth of high-status metalwork and coinage, most notably styli, and hanging-bowl fragments which have influenced its interpretation as a monastic or possible minster site (Webster in Webster & Backhouse 1991, 231-2, cat. no. 188). Field-walking has also recovered a modest amount of Ipswich-ware pottery from the vicinity. Although the results of the excavation were inconclusive and no structural features were discovered, an industrial area located on the waterfront was identified.

In contrast, other 'productive sites' have been far less productive in terms of their associated archaeological remains. Excavations prompted by the discovery of a hoard of 8th-century Beonna coins at Middle Harling, Norfolk, produced very little evidence contemporaneous with the Middle Saxon pottery and artefacts discovered in the overlying ploughsoil (Rogerson 1995). As the excavator admits this may be the result of the fact that only ten per cent of the area of the pottery scatter was actually excavated and consequently the siting of the excavation may have missed the main focus of Middle Saxon activity (ibid., 14). Essentially, the only features attributed with any certainty to this period were four stretches or fragments of ditches (ibid., 88).

The results of archaeological investigation in the vicinity of the significant scatter of Middle Saxon Ipswich-ware pottery, and metalwork, including some 50 coins and 74 artefacts, at Barham, Suffolk, were similarly ephemeral. The lack of convincing archaeological features contemporary with the artefactual scatter led John Newman to suggest that the evidence was best interpreted as a meeting place which attracted a seasonal fair or market (Newman 1995, 92).

For the unexcavated sites one is reliant upon a comparison of their artefactual assemblages to investigate their likely functions. Apart from coins and artefacts,

such as strap-ends, pins, and hooked tags, which appear in significant quantities on these sites, it is the conspicuous absence of domestic items such as tweezers, keys, knives, spindle whorls, loom-weights and pottery, which mark them out, even from other sites encompassed in the productive-site category. Could it be that the lack of domestic items at these sites suggests they acted as temporary foci for commercial activity? Such a hypothesis is strengthened at those sites located in strategic positions to exploit communication and trading networks. South Newbald, E. Yorks, for example, lies on the route of the main Roman road from Brough to Humber; Royston, Herts, meanwhile, lies on the border between the kingdoms of Mercia and East Anglia.

Richards has recently explored the productive-site phenomenon by comparing both excavated and metal-detected Middle Saxon sites in Northumbria (Richards 1999). He argues that the special status attributed to productive sites is a result of the increased levels of sampling associated with metal detecting and therefore misleading. By comparing find densities, i.e. the number of individual finds in relation to the area sampled by these retrieval techniques, he concludes that productive sites are poorer in economic terms than contemporary monastic and *Wic* sites and broadly similar in wealth to excavated rural sites such as Wharram Percy. For example, on the basis of quantity alone, the 34 strap-ends from Cottam B and 22+ from South Newbald appear impressive next to the totals of one and 14 from Wharram Percy and Whitby (ibid., table 1). Comparing strap-end density (as an average of strap-ends per 100 square metres), however, elevates Wharram Percy to a par with Cottam, and Whitby way out in front with over twice the density of finds.

A corollary to this hypothesis is that the primary function of such sites need not have been as commercial market places (Wise & Seaby 1995). If accepted, the implications of such an interpretation are twofold. Firstly, the apparent association between strap-ends and productive sites may be over-emphasised. Secondly, any functional interpretation based upon a presumed association with markets and fairs, for example, attachments to money-bags or horse-harness fittings, may be deceptive

(Webster in Webster & Backhouse 1991, 233; MacGregor 1994, 126). In light of the complexity and likely diversity of Middle Saxon settlement, however, there is no reason why the primary function, or at least one of the several activities associated with some of these sites, may not have been commercial.

To conclude this discussion, it is likely that in the context of so-called productive sites, the association between artefact category and site type may be over-emphasised. Meanwhile, attempting to derive functional interpretations based upon this presumed relationship is complicated by the fact that the range of activities carried out at many of these sites is unlikely to have been more restricted or specialised than those associated with other excavated Middle Saxon settlements. If anything, this conclusion further highlights the diversity of functional contexts associated with strap-end usage.

8.1.5 The objects themselves as a means of exploring function

a) Size and method of attachment

An exploration of the interrelated factors of size and strength of attachment can provide clues as to the original use of the strap-ends presented in the survey. Most of the classes are characterised by their small dimensions (Table 8.2). Meanwhile the most popular method of attachment involving a delicate split-end would have only been suited to light straps or belts. The fact that several examples within the corpus have damaged or broken split-ends is testimony to this limitation in their design.

Clearly such strap-ends are more likely to have been attached to light woven textile or ribbon straps/belts. This conclusion is consonant with their use as girdle ends in light of the evidence presented earlier for the replacement of heavier leather belts by lighter textile ones during the 8th century. Light cloth straps or ribbons were no doubt used in a variety of other functional contexts also, as evidenced by the range of delicate strap-ends discovered in pagan Saxon funerary contexts, not least as garter

ties (see Chapter 6). Such an interpretation must remain conjectural however, as the perishable nature of such organic straps has left a void in the archaeological record. Though rarely small sections of textile strap do survive, often as a result of mineralisation if still affixed to the metal strap-end (see Fig. 2.1).

CLASS	AVERAGE LENGTH (MM)	AVERAGE WIDTH (MM)
A	42.3	12.2
B	43.6	9.5
C	44.4	4.3
D	47.9	8.8
E	43.5	20.6
F	47.5	12.6
G	45.9	11.8
H	41.6	15.3
I	35.5	9.6
J	29.1	10.2
K	36.5	13.8

Table 8.2: Comparison of the dimensions among the principal Classes of strap-end

Even more delicate than the Class A and B varieties discussed above are Class C strap-ends characterised by their long narrow split-ends attached by means of a single rivet. These most likely acted as lace-tags used in association with shoes or garters. As such, they may well represent a possible successor to the lace-tags which feature in 7th-century grave assemblages (Geake 1997, 64-5, fig. 4.21). Of similar dimensions, these are generally constructed of rolled sheet metal into which the lace is inserted and then secured by a single rivet.

Also worthy of discussion are the broader, more robust dimensions associated with Class E and, to a lesser extent, Class H strap-ends, which often incorporated a sturdier method of fastening involving integral attachment-ends and an increased number of rivets. These could have endured the greater strain of heavier leather straps and belts associated with a variety of uses, some of which were evidenced through an examination of contemporary manuscript, grave and hoard evidence presented above. Their probable attachment to leather straps suggests that they may have been more likely to have been used in association with horse-harness fittings than their flimsier Class A cousins, a suggestion usually attributed to the latter (Webster in Webster & Backhouse 1991, 233; MacGregor 1994, 126).

b) Features of form and decoration

Unfortunately, there is little intrinsic to the design of the majority of Late Saxon and Viking strap-ends that can reveal much about their specific uses, apart from the fact that they acted as decorative terminals to straps and belts. The distinctive perforated type of Class F strap-end has attracted the suggestion that they may have had a more specialised function as book-clasps, a theory based upon the assumption that their perforations were designed to engage with a peg on the opposite cover of the book to keep it shut (Wilson in Bersu & Wilson 1966, 76). As convincingly argued by Graham-Campbell, however, it is more likely, on comparison with other contemporary Insular and Anglo-Saxon metalwork, that the perforation was once part of an ornamental feature, originally holding a central rivet elaborated at both ends by an ornamental boss (Graham-Campbell 1973a, 130; 1982, 149). Added support for this ornamental hypothesis for the Class as a whole is provided by the discovery of unperforated examples in the Danelaw.

Certain observations relating to the form and decoration of strap-ends may provide clues as to how they functioned. For example, the fact that the majority of designs executed on the Class A were designed to be viewed with terminal lowermost, suggests they were worn or attached in a vertical axis. This observation accords with

the suggestion that one of their functions was to weight the end of girdles so they hung attractively below the waist.

Analysis of the decoration on Winchester-style strap-ends indicated that their orientation was more variable, with some designed to be viewed with their tongue lowermost and others in the opposing direction. Perhaps this is an indication that, if used in conjunction with strap-slides, some were worn in a horizontal axis.

8.1.6 The relationship between Late Saxon strap-ends and buckles

Earlier in the chapter it was argued that the majority of Class A strap-ends were unlikely to have been used in conjunction with buckles, a suggestion supported by the fact that none has been discovered in direct association with buckles in either graves or hoards, unlike their Class E cousins. The discovery of some buckles which closely resemble contemporary 9th-century strap-ends in both dimensions and decoration, however, does present a possibility that matching buckle suites were in occasional use during this period.

Two fine copper-alloy examples come from the Fishergate site in York, though both are unfortunately derived from residual contexts. The first is sub-triangular in shape, the terminal of the loop section being extended to represent a stylised zoomorphic terminal (Fig. 8.2A). The plate section has a field of decoration occupied by a crouching and speckled backward-looking Trewhiddle-style beast inlaid with silver. Although the width of the buckle loop is 8.5mm wide, somewhat narrower than the average Class A strap-end, it would have been of sufficient size for a small example. The same may be said of the second example which has a slightly narrower loop, 7.2mm wide, though in this case the stylistic parallels are particularly striking (Fig. 8.2B). It too has an extended terminal zoomorphic terminal, but also a split attachment-end decorated with a foliate palmette exactly matching those used on Class A strap-ends. A further stylistic link comes in the form of a sub-rectangular

punched border around the pin-slot which resembles those used on Group A1a, ix strap-ends very closely.

Another good candidate comes from the site of Cottam, N. Humb (Haldenby, 1992, fig. 5, no. 1). This too has a pointed terminal representing a stylised animal head, while the frame is decorated with small Trewhiddle-style beasts inlaid with silver. In this case the internal dimensions of the buckle frame are slightly wider at 10.5mm.

The best dating for the series comes in the form of a more stylised member, with an integral plate and frame with a pointed terminal, discovered within a pre-10th-century context at Winchester (Hinton 1990c, no. 1098, fig. 129).

A particularly elaborate silver D-shaped buckle, discovered during excavations at St Paul-in-the-Bail, Lincoln, was found close to, but tantalisingly not in direct association with the fine silver Trewhiddle-style strap-end from the same site (Fig. 8.2C). The likelihood that these two items formed a matching suite is supported by the fact that they are of the same metal, have similar niello-inlaid Trewhiddle-style decoration and dimensions, the internal width of the buckle loop being 1mm wider than the maximum width of the strap-end.

Matching dimensions and decoration suggests that certain Anglo-Scandinavian Class B strap-ends may have also been used in association with buckles. Three closely related examples from Fishergate, York (Rogers 1993, no. 5314, fig. 650), Meols, Cheshire (Bu'lock 1960, fig. 7, g), and Cottam, Yorks (Haldenby 1992, fig. 5, no. 2) illustrate one such group, characterised by the use of animal heads located at the apex of the frame. Unlike the aforementioned series of Anglo-Saxon buckles the form of these heads with their rounded ears and 'muzzled' snouts have their closest parallels on Type B4 and B5 strap-ends and other Anglo-Scandinavian metalwork. It is of interest that all three of these sites have also produced examples of strap-ends belonging to this Anglo-Scandinavian tradition of metalworking.

Two further zoomorphic buckles may be more tentatively attributed to this group. The first, from London, is published in Wilson's catalogue of Late Saxon ornamental metalwork in the British Museum (1964a, cat. no. 49). Again, like the buckles discussed so far, its most prominent feature is a protruding animal head at the apex of the frame. In this case the individual features are treated slightly differently to the Anglo-Scandinavian series, having rounded eyes with spiral ridges developing into rounded brows. Its overall form, incorporating an integral frame and plate with a central slot for the pin is very similar to one of the Fishergate examples (Rogers 1993, no. 5312). The second, from Old Sarum, Wilts, has a D-shaped frame embellished with three animal heads, one at the apex and a further two located at each corner of the cross-bar (Fig. 8.2D). The form of the animal heads, which bear pairs of punched circular ears and rounded snouts, are not unlike those attributed to Anglo-Scandinavian workmanship.

Viking burials in the British Isles provide unequivocal evidence for the use of certain Class E strap-ends with matching buckles, as was the vogue in their Scandinavian homelands (see above). It is difficult to gauge whether such a fashion was adopted more widely in England during the 10th and 11th centuries, however. In light of the Viking connection one might expect this fashion to have more influence in areas of the Danelaw. It is tempting to attribute certain stray finds from this region to this tradition, a fine Borre-style buckle from Sculthorpe, Norfolk, for example, would have provided a fitting accompaniment to any of the several Type E4 strap-ends recorded in the present survey (Fig. 8.2E). Despite these isolated finds the evidence suggests that this fashion had a very limited impact. To date, only one buckle can be confidently attributed to the tradition of Winchester-style metalwork (Hinton 1990c, no. 1101, fig. 129), in comparison to the 95 Winchester-style strap-ends recorded here.

There is also circumstantial evidence that Insular Class F strap-ends may have been used in conjunction with buckles. This comprises two closely related buckles or buckle fragments, the first, a buckle-plate from Meols in Cheshire and the second

from the site of Eynsham abbey, Oxon, which has been subject to recent excavations by the OAU (Fig. 8.2F; Thomas, forthcoming). In both cases their design and decoration clearly indicate that they belong to the same metalworking tradition as the strap-ends, and there it is therefore probable, considering their similar dimensions, that the two categories of artefact were used in direct association.

8.1.7 Conclusions

What conclusions can be drawn from this discussion? Firstly, it re-emphasises the difficulty of ascribing functions to artefacts which in the main represent stray losses divorced from their original context of use. Secondly, an evaluation of the available evidence suggests that some functions may have been specific to certain classes of strap-end, the use of Class E examples in association with baldric mounts as indicated by contemporary manuscript illustrations, for example. Thirdly, their basic design, and the diversity of sites on which they are discovered, implies that strap-ends were a multi-purpose item that could have been adapted to suit a range of personal accessories, accoutrements and dress wherever straps or belts were involved.

Discussion has thus far focused upon the practical characteristics and functions of these objects. As set out in the theoretical framework to this study, however, it is argued that the design and decoration of strap-ends may reflect more widely on their role within contemporary society. Whatever their precise function/s, in functional terms, one of the most striking, yet obvious conclusions to be drawn from the survey is that the majority of strap-ends of the period were essentially items of decorative, personal display. This conclusion is based both on their stylistic diversity and individualism, as reflected in the intricate classification, but also on the frequent care and attention to detail encapsulated in their decoration. As discussed previously, these two qualities would have been intrinsic to these artefacts' involvement in the expression of social and ethnic identities as reflected in some of the regional stylistic groups highlighted in Chapter 7.

8.2 Production systems

8.2.1 Introduction and theoretical background

Chapter 5 discussed the technicalities of strap-end manufacture, evaluating the range of materials and techniques used in their fabrication. The following combines this evidence together with the information gleamed from later chapters, especially Chapter 7, with a view to understanding the wider context of the production systems which gave rise to these objects. A particular focus of discussion is an assessment of the levels of craft-specialisation associated with their manufacture and whether one can detect changes in these levels through time or across different regions.

At what level of craft specialisation were the majority of strap-ends produced? There has been much theoretical debate about the role of craft specialisation in the development of increasingly complex economic and political systems. (Peregrine 1991; Brumfiel & Earle 1987). Such studies suggest that there is often political motivation behind, and control of craft-specialisation. Indeed political interest appears paramount in the establishment of *emporia*, or permanent trading and production centres during the 8th century (Hodges 1982, 47-66; Scull 1993, 76). The emergence of sites such as Hamwic and Gippeswic is seen as primarily the result of political directives by ruling elites (in this case the West Saxon king, Ine, and the Wuffing dynasty of East Anglia) to manipulate and control external contacts in the maintenance and reproduction of their power-base.

More specifically, there have been many attempts to define the various levels of craft-specialisation, perhaps most relevant are those models based upon contemporary crafts in Viking-age Scandinavia (Ambrosiani 1981; Lundström 1981; Jansson 1981). These suggest a three-tier categorisation ranging from cottage industries, associated with domestic production, through to itinerant craftsmen, often working to order under direct elite patronage, and finally the emergence of permanent craft workshops in towns and other economic centres employing full-time

independent specialists (see also Brown 1992). It has been proposed that transformations between these differing production systems, especially the growth of independent specialists, was inextricably linked to socio-economic change (Brumield & Earle 1987, 5; Brown 1992).

Brown has specifically applied this model to explain changes in the metalworkers' craft during the Anglo-Saxon period. From an analysis of archaeological and documentary evidence Brown traces its transition from an essentially low-level, non-specialised craft tradition during the 6th and 7th centuries to a highly organised, stratified industry by the Late Saxon period. He contextualises these changes within wider socio-economic developments, arguing that an increase in population density, overall prosperity and mobility, allied to the growth of towns and a market economy, acted as stimuli to technological innovation and craft-specialisation (Brown 1992, 186-9).

Various strands of archaeological and historical information are highlighted as evidence for these industrial and technological advances. Documentary evidence makes reference to the increased independence, status, specialisation and stratification of metalworkers during the Late Saxon period. The growth of permanently based workshops in urban centres is well attested archaeologically (see also Bayley 1991), and in the case of iron-working, so is the reliance of these workshops upon rural hinterland sites for the production and supply of smelted metal (Brown 1992, 187).

Analysis of the artefactual record, meanwhile, suggests that in some cases the Late Saxon period is associated with the consistent use of a more restricted range of manufacturing techniques, especially those allied to the increasing importance of sheet-metal over cast production (see below). Some artefacts such as brooches and hooked tags attracted simpler designs and methods of decoration allowing mass production in base metals. As discussed previously in Chapter 5, these technological changes were accompanied by a shift to using purer, freshly smelted alloys and the

introduction of new base-metals such as lead and pewter for finished products. Ultimately, these advances enabled metalworkers to improve their productivity and reduce costs in an effort to supply the demands of a growing consumer market.

Ross (1991, chapters 4 & 8) argues on a similar basis that changes in Anglo-Saxon pin production closely mirror contemporary social and economic change. For example, the 7th-century pin assemblage is dominated by richly-ornamented composite examples. The production of these involved the full-range of materials and manufacturing techniques which ultimately necessitated a close link between craftsmen and elites within a wider social and economic network of localised gift-exchange (see Friedman & Rowlands 1978). By the later 8th century the proliferation of cast copper-alloy examples mirrors a breakdown in the former systems of prestige goods exchange. He argues the majority of pins from this period onwards were mass-produced within the monastic and urban centres which embodied a transformed social, political and economic infrastructure.

How does the strap-end evidence compare to these interpretations on the development of metalworking traditions during the Anglo-Saxon period? This question acts as a focus for the foregoing discussion, bearing in mind that the main period encompassed by the present survey coincides with the suggested date for the increased centralisation and intensification of metalworking during the Late Saxon period.

8.2.2 Sources of evidence

In light of the fact that no workshops specialising in the manufacture of Late Saxon strap-ends have yet been identified archaeologically, one is reliant upon indirect sources of evidence for investigating the theme of production. These include some of the conclusions set out in Chapter 5 relating to the technical aspects of strap-end manufacture, such as the materials and decorative techniques used, as well as the actual methods of fabrication and how these varied over time. Comparing the

stylistic variability and geographical spread of individual groups of strap-ends provides another important interpretative dimension, the premise underlying this analysis being that stylistically related examples with a defined distribution are likely to represent the products of a regional 'workshop' or single source of manufacture. The corollary to this hypothesis is that stylistically diverse groups with scattered distributions are more likely to reflect a dispersed, low-level mode of production.

a) Materials and manufacturing techniques

Chapter 5 indicated that 9th-century strap-ends were associated with a more varied range of manufacturing and decorative techniques than 10th- and 11th-century types. There is evidence for both the casting and wrought manufacture of Class A strap-ends, which are frequently decorated with applied inlays of precious metal, niello or enamel. In comparison, Class E, and the majority of contemporary strap-ends, are characterised by the exclusive use of cast decoration to produce heavy relief or openwork designs. The adoption of different manufacturing and decorative techniques was accompanied by some changes in the range of materials used in strap-end manufacture. While copper-alloy remained popular throughout, the use of precious metals, silver in particular, was more or less restricted to the 9th century. Class E strap-ends meanwhile, are associated with experimentation in cheaper base metals such as lead-alloy and pewter.

There are obvious points of comparison between these general chronological observations and the suggested developments in Late Saxon metalworking presented above. Perhaps most germane to the current discussion are indicators for the increasing standardisation of manufacturing techniques, and the increasing simplification of decorative designs used during the 10th century. Although status is still a feature of the 10th-century assemblage, with some strap-ends reaching high levels of artistic and technical excellence, the emphasis is no longer on baroque, ostentatious display through the use of precious metals and polychrome inlays, as in the preceding century. Meanwhile, the introduction of lead into the repertoire of

fabrication materials during the 10th century correlates with the more widespread evidence for the use of solid-mould technology and the production of lead and pewter dress-accessories, especially within towns (see Chapter 5).

Although some chronological differences in the manufacture of strap-ends are congruous with these postulated technological advances, one should be aware of other influencing factors, such as fashion and availability of raw materials. For example, the range of heavy relief and openwork designs fashionable during the 10th and 11th centuries could have been obtained using a more restricted and standardised repertoire of techniques associated with the casting and post-casting stages of production. On a similar note, fluctuations in the popularity and availability of differing metals during the Late Saxon period may also have contributed to changes in production. Precious metals such as gold and silver, being much more malleable than copper-alloys, allow a wider range of metalworking techniques to be practised. As a result the standardisation and simplification noted in the manufacture and decoration of 10th-century strap-ends may be allied to the declining use of silver which has previously been ascribed to both social and economic factors (see Chapter 5).

b) Stylistic variability and patterns of distribution

One of the defining characteristics of Late Saxon strap-ends is the diversity of their formal and decorative attributes, a feature which is reflected in the intricacy of the classification which accompanies the current survey. The levels of diversity are by no means consistent between and within individual classes, however, some classes being particularly homogeneous; others classes encapsulating varying degrees of homogeneity within individual types, sub-types, and/or groups. Though one must take into account the number of extant representatives, fluctuations in these levels both chronologically and regionally may relate to varying modes of manufacture, embracing a range from small-scale dispersed, to more intensive centralised production.

Central to the identification of more developed modes of production is the recognition of stylistically homogeneous groups of strap-end which have shared attributes of form and decoration indicating a common source of manufacture. As Hines stresses, however, even if the grouping together of individual artefacts as possible representatives of a single source through basic procedures of identification is relatively simple, confirmation of this link and the establishment of the exact nature of this single source is harder to achieve (Hines 1997, 215). The lack of metallurgical analysis in the current survey, which is often one of the only means of establishing a common origin of manufacture beyond reasonable doubt, renders this task even more intractable.

Interpretation must also allow for the fact that a single source may be constituted by a number of variables, ranging from a single, or else a group of artisans who worked either on a single fixed site or else peripatetically around many sites. The precise nature of these sites will have been heavily influenced by localised economic factors; as has been previously discussed, permanent 'workshops', due to high levels of demand and resource procurement, are more likely to have existed in towns than in rural areas. Study of Early Anglo-Saxon brooches, meanwhile, indicates that considerable variation can often exist between products attributed to the same 'workshop', suggesting that the majority of contemporary production sites may have been low-output and utilised by itinerant part-time smiths (Mortimer 1992, 100; quoted in Brown 1992, 188). As a result, any interpretations identifying 'workshops, 'schools' or 'traditions' must be sensitive to this potential variability, and by extension, acknowledge the imprecise nature of such terminology. This fact is largely responsible for the replacement of the above terms by 'single source of origin or manufacture' in the current text.

As highlighted at the beginning of this section, a much stronger case for a single manufacturing source, whatever its precise nature and constitution, may be provided if the geographic distribution of related strap-ends has a localised focus. Such attributions may be strengthened further if other classes of stylistically related

artefact share complimentary distributions, as for example, in the case of silver-wire hooked tags which, like the related series of strap-ends (Class A5), share a defined East Anglian distribution (see below).

8.2.3 Regionality and production during the 9th century

The most well-defined level of stylistic homogeneity versus confined distribution, apart from the discovery of pairs and trios of strap-ends from single findspots, is associated with Class C strap-ends discovered in significant numbers on urban sites such as Hamwic and Lundenwic. Other instances include the stereotyped Class B strap-ends from towns such as Winchester and Canterbury, and the series of simple folded, sheet-metal strap-ends from sites such as Flixborough, Lincs. As mentioned in the introduction, these examples, apart from the simple folded strap-ends, which could have been produced on-site on an *ad hoc* basis, are most likely to have been the products of what one might envisage as 'workshops' in the traditional sense, i.e. a production centre housing permanently based artisans.

Chapter 7 highlighted several instances of strap-end groups of varying size and homogeneity with regional distributions focused at less localised levels. Thus the distribution of some closely related strap-ends may be identified at the level of political kingdoms such as East Anglia or Northumbria, or regions embracing neighbouring kingdoms. This was found to be the case with several types or groups of Class A strap-end, including Trewhiddle-style variants confined to the north of the Humber and silver-wire strap-ends which have a geographic spread focusing on East Anglia. Again, establishing the precise modes of production which gave rise to these local products is a difficult task.

Taking Class A5, silver-wire strap-ends as an example, regional production is inferred not only from their defined distribution but also from the fact that their characteristic decoration is shared by several hooked tags from the same region. At the same time product variability is reflected by the internal division of the series into

four sub-types; only in specific cases, involving no more than two or three individual strap-ends, such as the Sub-type A5b examples from Felixstowe and Little Bealings, Suffolk (cat. nos 839 & 843), or the Sub-type A5c strap-ends from West Caister and Congham, Norfolk (cat. nos 855-6, Fig. 3.19A) are the degrees of similarity particularly marked.

Considering the variability of products associated with contemporary 'workshops', such a pattern could be the result of several small production sites located throughout the kingdom, either housing permanent or peripatetic craftspeople, or else a single production centre servicing the whole of the East Anglian region. The latter is less likely considering that the strap-end assemblage from Ipswich, the most probable candidate for the location of such a centre, is comprised of a wide range of contemporary classes. One might expect, as demonstrated by the production of Ipswich-ware pottery, that the relevant artefactual assemblage would be dominated by the *wic's* own products.

These conclusions have an equal bearing on the interpretation of other regional patterns during the 9th century. Even in the case of particularly homogeneous groups of strap-end, such as A1a, vii, several members of which have been interpreted as products of the same working model, can one assume a single production 'centre' or 'workshop' employing full-time specialists. Furthermore, as the strap-ends from Ipswich highlight, diversity is a feature of the site assemblages where one might expect to encounter standardisation. This includes several *wic* and high-status sites such as Flixborough, S. Humb, with plentiful evidence for non-ferrous metalworking (Loveluck 1998; see also Hinton 1999, 30).

This observation suggests one or a combination of two possibilities: either production was not focussed at such sites, or if it was, the method and intensity of manufacture was not conducive to the output of standardised products. The latter agrees with the suggestion that the majority of 9th-century strap-ends were wrought, a technological process associated with greater levels of product diversity (see

Chapter 5). Overall, the evidence for intensive, stereotyped production during the 9th century is slight. There is considerable evidence for regionalised production during this period manifest at different levels of intensity, though the likelihood is that these provincial production sites were fairly low-output. On this basis it is likely that the systems and organisation underlying strap-end production during the 9th century were not appreciably different to those proposed for some brooch types during the Early Saxon period. This interpretation also accounts for the levels of diversity encapsulated within the class as a whole.

8.2.4 Regionality and production during the 10th and 11th centuries

Regionalisation in strap-end manufacture is not as evident from a distributional analysis of 10th- and 11th-century strap-ends as it is for those of the preceding century, though this may largely be the result of the greatly diminished size of the database for this period. As discussion will highlight, however, this observation should not overshadow the fact some types of 10th-century strap-end do display localised distributions. Groups E2a, i, ii, and Type E3 strap-ends have defined spreads in East Anglia, for example, though their numbers are comparatively small in relation to those identified for Class A strap-ends (see Chapter 7).

Again, urban contexts provide the best evidence for more intensive standardised production during this period, as in the case of the series of stereotyped Class B strap-ends from towns such as Winchester and Canterbury, which display considerable uniformity in their simple form and decoration. Apart from these specific examples, however, diversity still characterises much of the database. Winchester-style strap-ends, for example, the most common manifestation of Type E, do not display marked regional variations in stylistic attributes, unlike their Class A predecessors. Their great variety, in terms of quality and stylistic content, suggests that they should be attributed to the various low-level modes of production described above.

Some of the 10th- to 11th-century strap-ends defined as 'Anglo-Scandinavian' in Chapters 3 and 7 provide some of the clearest indications for regionalised manufacture during this later period, suggesting networks of production exclusive to the sphere of influence of Viking settlement and contact. Is there any evidence for these groups having been manufactured by more advanced production systems given that the Vikings are suggested to have acted as a catalyst for the intensification and industrialisation of many contemporary craftwork activities, especially within the context of urban expansion (MacGregor 1978; Richards 1991, chapter 7).

Superficially, in terms of output, the most popular Anglo-Scandinavian varieties such as Types, B4, B5 and E4, do not appear to dominate Viking-age strap-end assemblages within the Danelaw. One must account for the waning popularity of this class of artefact during this period, however, and the fact that assemblages, even from large urban excavations, rarely compare with the size of those from 9th-century contexts. If one takes this factor into account such groups assume more prominence. For example, those strap-ends from Cottam, N. Humb, which can confidently be ascribed to the 10th and 11th centuries, are comprised exclusively of Anglo-Scandinavian types. Having said this, the overall reduction in the number of extant examples in comparison to 9th-century strap-ends, cannot be equated with more intensified and centralised production.

Within the distribution of Type B4, multi-headed strap-ends, there is a marked focus on York and its hinterland, with three representatives coming from excavations within the town itself. This is one of the few cases within the Danelaw where the evidence is sufficiently convincing to attribute a type or members of a type to a single centralised focus of manufacture. A contributing factor to consider when establishing the likely role of urban centres in the production of these strap-ends is their total absence from important Viking-age towns such as Lincoln and Stamford, though in these cases their respective artefactual assemblages are marked by a general paucity of non-ferrous dress-accessories.

How does this pattern compare with the production of other Viking-age dress-accessories and fittings? There is nothing in England to match the intensity and standardised manufacture of some brooch-types within Late Viking period Scandinavia (Graham-Campbell 1980, Chapter 8; Fuglesang 1992; Margeson 1997, 18). Archaeological evidence in the form of metalworking detritus, including re-usable moulds from sites such as Hedeby, Schleswig-Holstein, and Lund in Sweden, combined with the standardisation and widespread distribution of these brooches indicates that they were mass-produced at fixed 'workshop' sites. There is also convincing evidence for the mass or centralised production of dress-accessories elsewhere in the Viking world. For example, one-third of all ringed-pins, a distinctive Hiberno-Norse type-fossil widely distributed in the Viking settlements, has been discovered in Dublin, together with direct evidence for their manufacture (Fanning 1994, 1, Appendix I).

As highlighted above, within Viking-age England, there is a growing body of evidence to suggest that some classes of dress-accessory may have attracted more developed modes of production, both within the Danelaw and areas under Anglo-Saxon control, though admittedly, not the same level as those associated with the Viking homelands. Some Anglo-Scandinavian brooch types display considerable standardisation in form and decoration, combined with defined distributions, such as a previously mentioned series of Borre-style disc-brooches, some members of which have tentatively been attributed to a production centre based in Norwich (Richardson 1993, 31-32). The interpretation of pin manufacture during this period, meanwhile, has also been couched in terms of 'workshops' and 'mass-production' (Ross 1991).

Having considered this comparative evidence certain conclusions emerge. Firstly, the manufacture of Viking-age strap-ends was not subject to the same levels of intensity and standardisation associated with other contemporary artefacts in England or elsewhere in the Viking world. Secondly, analysis of the strap-end database does not support the existence of a widespread regional distinction in the production of these artefacts during the 10th and 11th centuries. In response to the aforementioned

query, there is no conclusive evidence that the modes of production associated with the manufacture of Anglo-Scandinavian strap-ends within the Danelaw were appreciably different to those associated with Winchester-style strap-ends in southern England. This conclusion is perhaps not unexpected in view of the fact that in certain regions strap-ends from both traditions were often circulated together and were thus most likely manufactured side by side (see Chapter 7).

8.2.5 Conclusions

What general conclusions can one draw from this discussion? Firstly, there are no clearly defined chronological or regional trends associated with the production of Late Saxon strap-ends. Unlike other contemporary artefacts where one is able to trace the increasing industrialisation and specialisation of the processes underlying their manufacture, the production systems associated with strap-ends were much more varied and diffuse. True, certain Late Saxon towns such as Winchester, are associated with more standardised products indicative of the activity of urban workshops, but as the case of Class C strap-ends indicates, in certain contexts one can trace development back into the Middle Saxon period. As decorative items of display, the extra care and artistic skills invested in their production may have disassociated them from some of these technological developments apparent from the study of other contemporary classes of metalwork.

When considering the strap-end evidence, it may be advisable not to adopt too evolutionary a stance in discussing the level of their production. Their use coincides with a period of increased craft production and specialisation at sites where favourable conditions existed, but production at a more localised and *ad hoc* level may have been equally prevalent in other areas where economic conditions were less advanced. Indeed, the patterns observed in their distribution and their levels of stylistic variation are best explained by the existence of several different systems operating simultaneously.

Overall, the variability displayed by these artefacts over wide areas is a reflection of the constant interchange of forms and motifs between different regions, a process attributable to various mechanisms. Considering the portable nature of these artefacts, one must consider the movement of the objects themselves, either through trade, or gift-giving or the movement of their owners. Another possibility is that the manufacturing process involved durable models or templates that could be moved from place to place. Finally, dispersal may have been the result of the movement of itinerant craftspeople associated with any of the above. Conversely, degrees of relatedness observable in the strap-end database may be viewed as the product of regional production associated with differing degrees of intensity and localisation as explored above.

CHAPTER 9: GENERAL CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

9.1 General conclusions

This comprehensive survey of the Late Saxon strap-end, which has allowed an unprecedented opportunity to present and analyse their rich and diverse morphology and decoration, represents an important new contribution to the study of Late Saxon ornamental metalwork. Purely in quantitative terms, the total of nearly 1,400 strap-ends presented here represents a huge increase on previous estimated totals for the entire corpus of ornamental metalwork. Twenty-five years ago, Hinton, bemoaning the then small size of the sample, exclaimed, 'to talk of style and schools, or production centres and patronage, may be over-ambitious when the student hardly needs a card-index, let alone a computer, to recall most of the data' (1975a, 171). As a result of this and other recent research, however, which draws extensively upon metal-detected finds, one can now talk in terms of several thousand as opposed to a few hundred artefacts. As the analysis and interpretation given here demonstrates, this expanded body of material offers considerable potential for detailed research and explanation, comparable to that associated with metalwork of the Early Saxon era.

From an art-historical perspective, the current survey has made some significant advances in the study of contemporary art-styles and metalworking techniques. The detailed account and presentation of twenty-three groups of Trewhiddle-style strap-end represents an important contribution to a re-evaluation of the style, first defined forty years ago (see Graham-Campbell 1982a, 150). Most importantly, this work, by providing additional evidence for the identification of chronological and regional variations within the style (Chapters 6 & 7), has highlighted the complexity and vitality of an artistic tradition formerly viewed as formulaic and homogeneous.

In addition to identifying diversity within the Trewhiddle style itself, study of 9th-century strap-ends has also highlighted a wide range of alternative styles current

during this period, some of which, because they are rarely encountered elsewhere in the corpus of contemporary ornamental metalwork, have hitherto gone unrecognised or have been little researched. Thus, the current study has brought to attention the more prevalent use of anthropomorphic imagery (see Type A3), a wide repertoire of simplified and standardised geometric motifs and patterns (Type A2), as well as distinctive decorative techniques associated with enamelling and niello-work (see Types A4 & 5). As in the case of Trewhiddle-style strap-ends, analysis of these stylistic variants provided added evidence for both chronological and regional patterning in the database.

The 9th-century material was also found to reflect a considerable range in manufacturing techniques. One of the important conclusions to emerge from the survey is that in the past scholars have over-emphasised the role of cast manufacture during this period. Close examination of the objects themselves, combined with an exploration of the relationship between stylistic diversity and regional patterning, highlighted the likelihood that 9th-century strap-ends were manufactured using a variety of techniques associated with both wrought and cast technology, with an emphasis on the former (Chapter 5). Furthermore, despite the limited evidence for more organised production, such as the change to using freshly smelted alloys, this variability suggests that for much of the period under review that the systems underlying their manufacture were both heterogeneous and dispersed (Chapter 8).

Overall, the database for the period coinciding with a peak in the production and circulation of this artefact class provides important evidence for the strength and vitality of regional identities and metalworking traditions during the 9th century. The sheer quantity and range of this material for the century's duration also carries important implications for assessing the impact of Viking activity on the economy and wealth of Anglo-Saxon England. If anything it suggests that their incursions may not have been as disruptive as contemporary commentators would have use believe (see Hinton 1990, 67).

Moving forward into the 10th century, despite the decline in strap-end numbers, the survey revealed the importance of this artefact class in the assimilation of external stylistic traits into the repertoire of Anglo-Saxon art. Discussion demonstrated their likely role as a medium for the introduction and circulation of Carolingian artistic motifs, such as acanthus and symmetrical vine-scroll, which were to have a enduring impact on the development of Anglo-Saxon Winchester-style art during the 10th century. The ninety-five strap-ends identified as exponents of this artistic tradition represent a sizeable addition to the comparatively small corpus of Winchester-style metalwork (see Hinton 1996, notes 1 & 6 for the most recent overview). While highlighting new levels of stylistic variability within the style, analysis of this material also demonstrated that its sphere of influence and production was geographically much wider than previously estimated (Chapter 7).

Nearly 10 per cent of the corpus is comprised of strap-ends identified as either products of foreign Scandinavian, or more commonly, a mixed Anglo-Scandinavian artistic milieu. This material has provided new insights into the influence and assimilation of Viking art-styles on contemporary ornamental metalwork and provides additional evidence in support of recent interpretations on the nature and scale of Viking settlement (Chapter 7; see Margeson 1996; 1997). Through refining existing distributions, analysis traced the likely origins and dispersal of this material, distinguishing between those strap-ends manufactured or circulated by Viking colonists in the Danelaw and the North Sea littoral.

Again one of the results of this research has been to extend the known repertoire of motifs attributable to this mixed cultural and artistic tradition. One such example is the East Anglian series of animal mask and ring-knot strap-ends (Sub-type E4a). These not only represent a novel addition to the corpus of Anglo-Scandinavian metalwork, but along with other contemporary metalwork such as disc-brooches, highlight the importance of the East Anglian region as a centre for the production of Borre-style metalwork during the 10th century (see Chapter 7). Looking forward in time, this and comparative studies, such as Williams' on stirrup-strap mounts (1997),

has increased our awareness of the popularity and influence of Late Viking art-styles during the 11th century, especially in the south of the country. In some cases, the motifs derived from these styles, such as the distinctive profiled heads which characterise Class I strap-ends, provide tantalising evidence for the enduring impact of these artistic traditions beyond the Norman Conquest.

9.2 Future research

The removal or lightening of the various constraints imposed on the current study (see Chapter 2), whether consciously by the researcher, or through general developments in the field of archaeology, has the potential to open up a rich and diverse range of future research avenues. In addition, the analysis and interpretation encapsulated in the previous chapters has identified new research goals. In light of the above, this chapter concludes with some suggestions for future directions both for the refinement and the expansion of the work embodied in this thesis.

9.2.1 Embracing other contemporary artefact classes

To enable a sufficiently detailed and rigorous programme of research, the current study has necessarily concentrated upon the strap-end as the single focus of analysis. It is important, however, to acknowledge the general increase in the quantity of Late Saxon ornamental metalwork now available for study, primarily as a result of metal-detector activity over the past twenty years. The potential for a reappraisal of a variety of other contemporary artefact classes has been demonstrated by studies such as that by Williams on stirrup-strap mounts, which benefited greatly from the wealth of data derived from this source (Williams 1997). Extending this level of research to other metallic dress-accessories and artefacts is thus of paramount importance if some of the interpretations set out in the current survey are to be adequately understood and contextualised. Hooked tags, for example, would be an artefact type particularly worthy of future investigation, in light of their stylistic affinity with some classes of contemporary strap-end. As preliminary investigations demonstrated

in Chapter 7, a case for regional manufacture is far stronger when several classes of artefact with complementary distributions can be shown to belong to the same stylistic tradition.

9.2.2 Expanding the geographical scope and refining existing distributions

Widening the research to include strap-ends and related metalwork outside the geographical confines of the present study is considered of primary importance for furthering an understanding of these artefacts, especially for defining the external influences leading to stylistic transfer and assimilation. This is particularly the case for assessing the origin of Anglo-Scandinavian strap-ends, a quest that would undoubtedly benefit from data-retrieval from countries such as Denmark which have also witnessed an upsurge in the quantity of Viking-age metalwork available for study as a result of metal-detecting in recent years (Nielsen & Peterson 1993). Looking to the continent may also provide additional information on the route-ways and mechanisms by which Carolingian strap-ends came to influence the development of the Anglo-Saxon series.

Closer to home, a fuller understanding of the genesis and development of the main classes will remain incomplete without the inclusion of the Irish dimension. This is especially the case for the 9th-century types, considering the close cultural and artistic links that then existed between Ireland and Anglo-Saxon England and the general influence of the Irish cultural domain on the Insular tradition (Ryan 1991). Examination of the several Class A examples discovered during excavations in Dublin (Graham-Campbell, pers. comm.) should allow one to adduce whether or not these represent regional types indicative of contact with particular regions of Anglo-Saxon England. Looking forward in time, a study of the Irish material should provide a fuller understanding of the origins and development of Insular Class F strap-ends, as well as defining the western limits of the distribution of some 10th-century strap-ends. In respect to the latter, it will be interesting to establish whether or not contacts between Dublin and England prior to the Anglo-Norman take-over in

1171 are reflected in the database of strap-ends from the city as they are from the discovery of other high-status Winchester-style material, such as a fine openwork mount from Fishamble Street (Halpin 1988).

On the subject of distribution, one recent archaeological development which will undoubtedly necessitate future re-evaluation, and in its wake refinement of this aspect of study, has been the Government's pragmatic initiative toward the voluntary recording of portable antiquities (Anon 1997, Appendix 2). Already, the eleven regionally-based recording schemes currently in operation, which it is aimed will be expanded upon to achieve national coverage by the year 2001, are beginning to counter-balance the eastern bias in the discovery of metallic finds highlighted in Chapter 4. It will be of considerable interest to see if this new data reinforces, alters or challenges some of the interpretations relating to the archaeological distribution of these artefacts presented in previous chapters.

9.2.3 Expanding the temporal scope and measures towards refining a chronology for Late Saxon and Viking-age strap-ends

Its basic design and versatility has ensured that, as an artefact category, the strap-end has enjoyed long periods of uninterrupted use, albeit with fluctuating popularity. The necessity of setting strict chronological limits for such a detailed study as this has ultimately prevented analysis of longer-term developments in respect to their formal and decorative attributes, as well as factors relating to their manufacture, distribution and function. In light of this interpretative shortcoming, chronological interpretations encapsulated in the current study would benefit greatly from detailed research into strap-ends from the periods immediately preceding and following that focussed upon here. Establishing more precisely the origins and development of Class A strap-ends is a task particularly worthy of focus, though such may well remain somewhat enigmatic until the quantity of 8th-century material increases.

Meanwhile, future enhancements in absolute dating, as well as improving excavation techniques, hold the potential for refining the chronology associated with excavated examples and thus the sample as a whole.

9.2.4 Scientific and technical analysis

One particular analytical gap highlighted in Chapters 5 and 8 is the lack of scientific identification of the metals and materials used in strap-end manufacture. Not only is such work an essential requirement for establishing the existence and composition of decorative inlays on some strap-ends, it would also enrich several lines of interpretation presented in previous chapters. Firstly, such analysis has the potential to reveal chronological trends in the use of alloy sources, while also highlighting the association of some alloy types with particular decorative techniques, as noted in Chapter 5. In relation to methods of manufacture, subjecting selected members of the corpus to microscopic thin-section analysis, as is currently being undertaken on some of the unfinished Sevington examples (Susan La Niece, pers. comm.), would differentiate between the range of manufacturing techniques suggested in Chapter 5. If combined with compositional analysis, this might also highlight relationships between the selection of alloy types and methods of fabrication.

In the context of defining regional patterns in the production of Late Saxon and Viking-age strap-ends, such research holds considerable potential for positively identifying common places of manufacture, if such strap-ends were produced from common stocks of metal. The results of this analysis would also have wider application for assessing the level of intensity involved with their production (see Chapter 8).

If extended to embrace other contemporary metalwork, analysis of this nature could also establish the existence of integrated production systems, already hinted at by the shared stylistic repertoire of some artefact categories. In the case of silver strap-ends, meanwhile, a comparison of purity levels with contemporary coinage could help in

refining a chronology for the class as a whole, as has been done for individual artefacts from the period (e.g. MacGregor 1994, in the case of the strap-end pair from Ipsden Heath, Oxon, cat. no. 430).

9.2.5 Theoretical applications

As highlighted in Chapter 2, the data and analysis encapsulated in this survey offers considerable potential for the application and testing of various theoretical models geared towards supplementing and enriching existing interpretations. The primary goal of this future research would be to explore relationships between stylistic variability and patterns in the production, regional distribution and chronology of these artefacts in terms of cultural interaction and the expression of differing social identities.

This level of interpretation could target pre-defined research questions, some of which were defined more fully in Chapter 2. Most potential revolves around an investigation of how various social identities, as expressed through contemporary artefact styles, were negotiated and transformed during the course of the Late Saxon period. The increasing evidence for regionalisation in the 9th-century corpus, for example, could be contrasted with other, more uniform and widespread aspects of the database, to highlight the interplay of surviving regional identities with a developing national consciousness during this period.

Similarly, a problematisation of the complex range of social interactions arising from Scandinavian settlement in the Danelaw during the 10th century could profitably draw upon the expanded corpus of Anglo-Scandinavian metalwork encompassed in this research. A more detailed investigation of the distribution and stylistic content of this material will help in identifying both regional variations in the density of colonisation and in the development and repertoire of hybrid stylistic motifs which reflect upon the process of cultural assimilation.

Ultimately, as highlighted above, ones ability to apply social meaning to variability displayed by the corpus of Late Saxon and Viking-age strap-ends will be significantly enhanced if detailed analysis is extended to cover the full complement of contemporary artefact classes. The research embodied in this thesis, while acting as springboard for such a comparative survey, will ensure the unique and prominent position of the strap-end in the future study of Late Saxon ornamental metalwork as it embraces new developments in archaeological methodology and theory.

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Note: the system of abbreviations used here is that of the CBA *list of Standard abbreviations* (published by the Council for British Archaeology 1991). Where sources not included in the CBA list have been used (such as journals published outside the United Kingdom), the same system of abbreviations has been applied if the journal title is in English, otherwise the title is given in full.

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APPENDIX 1: A CHECKLIST OF LATE SAXON AND VIKING-AGE STRAP-ENDS

Guidlines for Using Appendices 1 & 2:

Catalogue number: each strap-end recorded in the survey is provided with a unique catalogue number. These are ordered sequentially by a combined sort of classification, county and finally findspot. Members of a pair or trio, if of similar dimensions, and belonging to the same classificatory group, are catalogued under the same number indicated by an asterisk followed by the number of individual strap-ends.

Class (Classification): indicates a strap-end's place in the classification set out in Chapter 3. Unfinished strap-ends and possible models used during the manufacturing process are indicated by the suffix 'manu.'.

Findspot: provides a provenance for each strap-end based upon a parish name. In some cases, if the strap-end lacks an accurate provenance, a broader region such as North East Lincs or East Anglia is used. Unprovenanced strap-ends are indicated by the abbreviation 'unprov'.

County: indicates the county of origin, or country, if the strap-end was discovered in either Scotland or Wales. The counties cited relate to post-1974 administrative boundaries, not those associated with the more recent changes to the bounds of unitary authorities made during the course of this research.

Find Type: the three major find types associated with strap-ends presented in the survey were defined in Chapter 4. They are as follows; archaeological (ARCH), hoard (H), metal-detector (MD), old (OLD), and (OLD/ARCH), strap-ends associated with antiquarian activity and archaeological excavations prior to the 1930s.

Materials: wherever possible, the material of each strap-end is recorded. This field also identifies rivets if they are of a different metal to the main body of the strap-end as well as the presence of decorative inlays, though in most cases these are only identified visually (see Chapter 5).

Preservation: this field firstly indicates the completeness of each strap-end expressed as a percentage based upon a visual estimate. Strap-ends which have missing rivets are assigned to 95%. Larger fragments are described as upper, lower, or median, smaller, as terminal, split, or attachment ends. Wherever possible, wear or corrosion is recorded, as are breakages on incomplete strap-ends.

Length (l): length of strap-end in millimeters

Width (w): width of strap-end in millimeters

Location: provides details on the current location of each strap-end. The abbreviation PP is ascribed to those strap-ends held in private possession. See list of abbreviations for strap-ends held in museums and archaeological institutions.

Publication/Source: supplies references for published strap-ends. Though not exhaustive, multiple reverences are given for strap-ends published on several occasions. For unpublished strap-ends held in private possession, wherever possible, details are also given for the source of information. This may relate to identifications made by museums, county SMR's and other archaeological institutions. Individuals who provided access to record material within their own private collections, or gave information on other strap-ends are also cited. See list of abbreviations for archeological institutions and bodies.

Abbreviations:

A.M.	Ashmolean Museum, Oxford
A.R.C.	Archaeological Rescource Centre, York
A.Y.B.C.M.	Aylesbury Buckinghamshire County Museum
A.Y.B.C.M.T.C.	Aylesbury Buckinghamshire County Museum Technical Centre
B.C.C.A.S.	Buckinghamshire County Council Archaeological Service
B.C.M.	Bristol City Museum and Art Gallery
B.H.M.	Barbican House Museum, Lewes
B.M.	British Museum, London
C. & E.M.	Colchester and Essex Museum
C.& C.M.L.	City and County Museum, Lincoln
C.A.T.	Canterbury Archaeological Trust
C.A.U.	Carlisle Archaeological Unit
C.C.C.A.S.	Cambridgeshire County Council Archaeological Service
C.D.M.	Chichetser District Museum
C.M.	Royal Museum and Art Gallery, Canterbury
C.U.M.A.A.	Cambridge University Museum of Archaeology and Anthropology
D.C.C.A.S.	Dorset County Council Archaeological Service
D.C.M.	Dorset County Museum, Dorchester
D.M.	Devizes Museum, Wiltshire
E.C.C.A.S.	Essex County Council Archaeological Service
G.C.M.	Gloucester City Museum and Art Gallery
G.M.	Grosvener Museum, Chester
H. & W.C.M.	Hereford and Worcester County Museum, Hartlebury
H.F.A.	Humber Field Archaeology
H.H.R.C.	Hyde Historic Resources Centre, Winchester
I.M.	Ipswich Museum
J.W.M.	Jewry Wall Museum, Leicester
K.L.M.	Kings Lynn Museum
M.H.M.	Moyses Hall Museum, Bury St Edmunds
M.M.	Maidstone Museum and Art Gallery, Kent
M.O.L.	Museum of London
N.C.C.A.S.	Northamptonshire County Council Archaeological Service
N.C.M.	Norwich Castle Museum
N.M.G.M., L.M.	National Museums and Galleries on Mersyside, Liverpool Museum
N.M.S., E.	National Museums of Scotland, Edinburgh
O.A.U.	Oxford Archaeological Unit
S.C.C.A.S.	Suffolk County Council Archaeological Service
S.C.H.	Southampton City Heritage
S.M.	Scunthorpe Museum and Art Gallery

S.W.M.	Saffron Walden Museum, Essex
T.H.M.	Tullie House Museum, Carlisle
U.C.L.	University College London
W.C.M.	Winchester City Museum
Y.A.T.	Yorkshire Archaeological Trust
Y.M.	Yorkshire Museum

Cat. No.	Class	Find Place	County	Find Type	Material	Preservation	L mm	W mm	Location	Publication/Source
1	A	Lansdown, Bath.	Avon	OLD	Ag	90%	-	-	?	Gardner 1955; Wilson & Blunt 1961; 121; Wilson 1964a; 107
2	A	Great Linford	Bucks	MD	Cu-alloy, Ag inlay	100%	36	-	PP	Bucks SMR; site no. 3571
3	A	High Wycombe	Bucks	MD	Cu-alloy	80%, split-end missing	35	11	A.Y.B.C.M.T.C. 1983.300.10	
4	A	Shenley Brook End	Bucks	MD	Cu-alloy	90%	34	9.6	A.Y.B.C.M.T.C. 1996.88.1	
5	A	Shenley Brook End	Bucks	MD	Cu-alloy	95%	33.5	10	A.Y.B.C.M. 1991.58.2	
6	A (manu.)	Shenley Brook End	Bucks	MD	Lead or Lead-alloy	100%	37	11.7	A.Y.B.C.M.T.C. 1996.88.2	
7	A	Westcroft, Milton Keynes	Bucks	MD	Cu-alloy	60%, corroded	25	10.5	A.Y.B.C.M. T.C. 1993.155.1	
8	A	Bottisham	Cambs	MD	Cu-alloy, niello inlay	45%, terminal fragment	22	12.8	PP	Graham-Campbell 1985, 34, no. 202, fig. 14
9	A	Hauxton Mill	Cambs	OLD	Cu-alloy	90%, very worn	39.9	11.7	?	Lethbridge 1938, 327, no. 52, pl. XI, j; Wilson & Blunt 1961, 121; Wilson 1964a, 104
10	A	Soham	Cambs	MD	Cu-alloy	90%	40	13.2	PP	Graham-Campbell 1985, 34, no. 198, fig. 14
11	A	Meols	Cheshire	OLD	?	90%	40	11	Lost	Hume, 1863, 125, pl. XI, 10; Wilson & Blunt 1961, 121; Wilson 1964a, 109; Griffiths 1991, cat. no. 107, M/ST 7, pl. 10
12	A	Meols	Cheshire	OLD	?	90%	55	11	Lost	Hume, 1863, 125, pl. XI, 10; Bu'lock 1960, 11, fig. 4b; Wilson & Blunt 1961, 121; Wilson 1964a, 109; Griffiths 1991, cat. no. 108, M/ST 8, pl. 10
13	A	Asby	Cumbria	MD	Cu-alloy	90%, damaged split-end, very worn	46.1	11.6	PP	B.M. record

14	A	Asby	Cumbria	MD	Cu-alloy	80%, damaged split-end, very worn	43.9	7.4	PP	B.M. record
15	A	Asby	Cumbria	MD	Cu-alloy	15%, split-end fragment	12.8	17.3	PP	B.M. record
16	A	Repton	Derbs	ARCH	Cu-alloy, gilt	95%	31	10	?	Nick Wickenden in prep.
17	A	Repton	Derbs	ARCH	Cu-alloy	25%, corroded	-	-	?	Nick Wickenden in prep.
18	A	Stour Valley	Dorset	MD	Cu-alloy	95%	62.2	20.3	PP	Info. c/o Nick Griffiths
19	A	Stour Valley	Dorset	MD	Cu-alloy	95%	53.7	19 4	PP	Info. c/o Nick Griffiths
20	A	Whithorn	Dumfries & Galloway, Scotland	ARCH	Cu-alloy	95%	50.5	14.6	?	Nicholson & Hill 1997, 374, BZ19a, 3, fig. 10.58
21	A	Unprov.	East Anglia	MD	Cu-alloy	95%	46.2	12.1	PP	Info. c/o David Haldenby
22	A	Chelmsford	Essex	MD	Cu-alloy	25%, terminal fragment	17.25	8.7	PP	Info. c/o David Haldenby
23	A	Debden Cross	Essex	MD	Cu alloy		-	-	S.W.M. 1993.15	
24	A	Bredon Hill	H & W	MD	Cu-alloy, niello inlay	95%	35.5	9.5	PP	B.M. File
25	A	North Claines	H & W	MD	?		-	-	PP	H & W SMR ref. 11974
26	A	Shrawley	H & W	MD	Cu-alloy		-	-	H & W.C.M. 3720	
27	A	Hamwic	Hants	ARCH	Cu-alloy	98%	33	10.6	S.C.H.	Hinton 1996a, 11 3, fig. 17
28	A	Royston	Herts	MD	Cu-alloy	35%, terminal fragment	32	12	PP	B.M. record
29	A	Royston	Herts	MD	Cu-alloy	25%, terminal fragment	24.9	13.2	PP	B.M. record
30	A	Royston	Herts	MD	Cu alloy	30%, terminal fragment	23.5	9 4	PP	B.M. record
31	A	Royston	Herts	MD	Cu-alloy	75%, terminal missing	25.1	9	PP	B.M. record

32	A	Alkborough	Humb, N	MD	Cu-alloy	95%	47.2	16.5	PP	Info. c/o David Haldenby
33	A	Beverly	Humb, N	MD	Cu-alloy, niello inlay	95%	45	14.5	PP	B.M. record
34	A	Brigg	Humb, N	MD	Cu-alloy	85%, worn, damaged split-end	53.6	13.1	PP	Info. c/o David Haldenby
35	A	Cottam	Humb, N	MD	Cu-alloy	75%, badly corroded, split-end missing	27.8	10.8	PP	Haldenby 1990, fig. 4, no. 14
36	A	Cottam	Humb, N	MD	Cu-alloy	75%, corroded, split-end damaged	24.8	8.6	PP	Haldenby 1990, fig. 4, no. 15
37	A	Cottam	Humb, N	MD	Cu-alloy	60%, terminal missing	30.4	10.9	PP	Haldenby 1992, fig. 3, no. 8
38	A	Cottam	Humb, N	MD	Cu-alloy	95%, worn	46.5	10.9	PP	Haldenby 1990, fig. 4, no. 6
39	A	Hotham	Humb, N	MD	Cu-alloy	75%, split-end missing	31.2	9.4	PP	Info. c/o David Haldenby
40	A	Market Weighton	Humb, N	MD	Cu-alloy, enamel inlay	75%, split-end missing	33.2	12	Hull Museum 136.1980.1	
41	A	Newbald, South	Humb, N	MD	Cu-alloy	70%, split-end missing	29	12.2	Hull Museum 104.1981.1	
42	A	Newbald, South	Humb, N	MD	Cu-alloy	10%, terminal fragment	14.4	7.9	PP	
43	A	Newbald, South	Humb, N	MD	Cu-alloy	90%, worn, split-end damaged	27	9.7	Hull Museum 136.1980.3	
44	A	Newbald, South	Humb, N	MD	Cu-alloy	90%, damaged split-end	29.7	10.8	PP	Info c/o Kevin Leahy, S.M.
45	A	Newbald, South	Humb, N	MD	Cu-alloy	80%, split-end missing	33	10	PP	Info c/o Kevin Leahy, S.M.
46	A	Pocklington	Humb, N	MD	Cu-alloy	95%	29.5	7.6	PP	A.R.C. record sheet
47	A	Sancton	Humb, N	MD	Cu-alloy	95%, unfinished ?	29.4	10.3	PP	S.M. record card
48	A	Thwing	Humb, N	ARCH	Cu-alloy	95%	41.1	9.3	?	Info. c/o Terry Manby
49	A	Flixborough	Humb, S	ARCH	Cu-alloy	95%	27.1	15.3	H.F.A. sf 1524	Thomas forthcoming

50	A	Flixborough	Humb, S	ARCH	Cu-alloy	15%, split-end fragment	13	12.7	H.F.A. sf 3444	Thomas forthcoming
51	A	Flixborough	Humb, S	ARCH	Cu-alloy, Fe rivets	15%, split-end fragment	12	11.4	H.F.A. sf 4600	Thomas forthcoming
52	A	Flixborough	Humb, S	ARCH	Cu-alloy	15%, split-end fragment	13.7	12.4	H.F.A. sf 3828	Thomas forthcoming
53	A	Winteringham	Humb, S	MD	Cu-alloy	90%, R.H. corner of split-end missing.	32.5	12.5	S.M. WGM XX 31	
54	A	Winteringham	Humb, S	MD	Cu-alloy	90%, damaged split-end	37.4	14.5	S.M. WGM XX 32	
55	A	Canterbury, Christchurch College	Kent	ARCH	Cu-alloy	90%	37.6	8	C.M. 1989.38	
56	A	Canterbury, Christchurch College	Kent	ARCH	Cu-alloy	90%	39	11.5	C.M. 1993.45	
57	A	Canterbury, Christchurch College	Kent	ARCH	Cu-alloy	90%	61.8	16	C.M. 1993.207	
58	A	Canterbury, Marlowe II	Kent	ARCH	Cu-alloy	90%	43.5	12.7	C.M. 1979.354	
59	A	Canterbury, nr	Kent	MD	Cu-alloy, Ag inlay	50%, lower fragment	20.5	12	PP	B.M. Record
60	A	Gravesend	Kent	MD	Cu-alloy	95%	48	12	PP	M.M. entry
61	A	Horton Kirby	Kent	MD	Cu-alloy	95%	40	11.2	PP	Info. c/o David Haldenby
62	A	Unprov.	Kent	MD	Cu-alloy	90% , worn	34	8	M.M.	
63	A	Cossington	Leics	MD	Cu-alloy	70%, split-end missing	35.8	13.7	PP	Leics. SMR M. 13352
64	A	Goadby Marwood	Leics	MD	Cu-alloy	95%	41	14.1	PP	Leics SMR
65	A	Normanton-on-Soar	Leics	MD	Cu-alloy	85%, worn and split-end broken.	55	8.5	PP	Leic. SMR
66	A	Wymeswold	Leics	MD	Cu-alloy	100%, worn	36	8.5	PP	Leics SMR M9427

67	A	Wymeswold	Leics	MD	Cu-alloy	15%, terminal fragment	20.6	11.8	PP	Leic. SMR
68	A	Wymeswold	Leics	MD	Cu-alloy	15%, terminal fragment	13.5	7.2	PP	Leic. SMR
69	A	Wymeswold	Leics	MD	Cu-alloy	90%, damaged split-end, worn	42.5	9.5	PP	Leics SMR
70	A	Wymeswold	Leics	MD	Cu-alloy	50%	28.4	9.5	PP	Leics SMR M9428
71	A	Ashby-de-la-Launde	Lincs	MD	Cu-alloy	95%	45	10.5	PP	S.M. record card
72	A	Brocklesby	Lincs	MD	Cu-alloy	100%, very worn	50.7	9.5	S.M. 1989. 363. 4	
73	A	Lincs, North	Lincs	MD	Cu-alloy	90%, split-end damaged, worn	45.9	9.7	S.M. 1995. 112. 2	
74	A	Louth	Lincs	MD	Cu-alloy	65%, split-end missing, very worn	34.4	15.3	S.M. not accessioned	S.M. record card
75	A	Louth	Lincs	MD	Cu-alloy	60%, terminal missing, worn	25	11.9	S.M. not accessioned	S.M. record card
76	A	Melton Ross	Humb, S	MD	Cu-alloy	95%	50	10	PP	S.M. record card
77	A	Roxby	Lincs	MD	Cu-alloy	95%	39.5	17	PP	S.M. record card
78	A	Stain	Lincs	MD	Cu-alloy	10%, terminal fragment	19.1	9.8	PP	S.M. record card
79	A	Torksey	Lincs	MD	Cu-alloy	15%, split-end fragment	14.6	18.1	PP	S.M. record card
80	A	Torksey	Lincs	MD	Cu-alloy	75%, split-end missing	34.7	9.8	PP	S.M. record card
81	A	Torksey	Lincs	MD	Cu-alloy, Ag inlay, Fe rivets	50%, split-end missing	20.9	10.5	PP	S.M. record card
82	A	Welton le-Marsh	Lincs	MD	Cu-alloy	60%, split-end missing, worn	37.9	10.7	PP	S.M. record card
83	A	Welton le Marsh	Lincs	MD	Cu-alloy	80%, split-end missing	35.6	11.1	PP	S.M. record card
84	A	Banham	Norfolk	MD	Cu-alloy	25%, terminal fragment	23.7	12	PP	Norfolk SMR no. 25734

85	A	Bawsey	Norfolk	MD	Cu-alloy	25%, split-end fragment	18.7	10.9	N.C.M.	Norfolk SMR no. 12364.138
86	A	Bawsey	Norfolk	MD	Cu-alloy	15%, split-end fragment	11.8	13.7	N.C.M.	Norfolk SMR no. 12364.51
87	A	Bawsey	Norfolk	MD	Cu-alloy	98%, worn	55.6	14.9	N.C.M.	Norfolk SMR no. 21078.33
88	A	Bawsey	Norfolk	MD	Cu-alloy	15%, terminal fragment	22.3	11.1	N.C.M.	Norfolk SMR no. 21078.46
89	A	Bawsey	Norfolk	MD	Cu-alloy	15%, terminal fragment	18.7	9.3	N.C.M.	Norfolk SMR no.3326.3
90	A	Bawsey	Norfolk	MD	Cu-alloy	Split-end fragments	-	-	N.C.M.	Norfolk SMR no. 25962.25
91	A	Bircham, Great	Norfolk	MD	Cu-alloy, gilt	95%	-	-	K.L.M. 1978.85.6	
92	A	Elmsham, North	Norfolk	MD	Cu-alloy, gilt	75%, worn, split-end missing	33	14.5	PP	Info. c/o David Haldenby
93	A	Foulden	Norfolk	MD	Cu-alloy	100%	66	16	K.L.M. 1981.75.1	Norfolk SMR no. 17292
94	A	Glandford	Norfolk	MD	Cu-alloy, niello inlay	75%, worn with split-end missing	36.3	12.6	PP	Norfolk SMR
95	A	Holt	Norfolk	MD	Cu-alloy	75%, worn	38.3	15.9	PP	Norfolk SMR
96	A	Lopham, North	Norfolk	MD	Cu-alloy	85%, damaged split-end	36.2	10.6	PP	Norfolk SMR no. 30181
97	A	Quidenham	Norfolk	MD	Cu-alloy	90%, damaged at split end	36	11.1	PP	Norfolk SMR no. 24050
98	A	Ringstead Barrett	Norfolk	MD	Cu-alloy, inlay	95%, worn, inlay missing	39.5	10.8	PP	Norfolk SMR no. 1115
99	A	Sporle	Norfolk	MD	Cu-alloy	90%, tip broken	30.8	9.8	PP	Norfolk SMR
100	A	Trowse-nr-Newton	Norfolk	MD	Cu-alloy	75%, worn, split-end damaged	39	10.3	PP	Norfolk SMR no. 25710
101	A	Unprov.	Norfolk	MD	Cu alloy	95%	38.4	12	PP	Info. c o David Haldenby
102	A	Unprov.	Norfolk	MD	Cu-alloy	95%	31.1	14	K.L.M. 1993.351.36	
103	A	Walpole St Peter	Norfolk	MD	Cu alloy, inlay	15%, terminal fragment	22.6	15.2	PP	Norfolk SMR no. 21341; Gurney 1990, 103, fig. 8, no. 7

104	A	Walpole-St-Peter	Norfolk	MD	Cu-alloy	75%, split-end missing, worn	40.9	11.9	PP	Norfolk SMR no. 21341; Gurney 1990, 103, fig. 8, no. 6
105	A	Wiveton	Norfolk	MD		95%, worn			PP	Norfolk SMR no. 25862
106	A	Wreningham	Norfolk	MD	Cu-alloy	97%, worn	30	15.3	PP	Norfolk SMR no. 28494
107	A	Evenley	Northants	MD	Cu-alloy	90%, very worn, broken at split-end	45	9	PP	Info. c/o N.C.C.A.S
108	A	Kinoulton	Notts	MD	Cu-alloy	90%, damaged split-end	56	13	PP	Info. c/o David Haldenby
109	A	Thorpe-in-the-Glebe	Notts	MD	Cu-alloy	95%	-	-	PP	Notts SMR
110	A	Yarnton	Oxon	ARCH	Cu-alloy	40%, terminal fragment	27.6	10.5	O.A.U.	
111	A	Cheddar	Somerset	ARCH	Cu-alloy	15%, terminal fragment	18	7.7	Taunton Museum	Wilson 1979, 282, C.A. 30, fig. 95
112	A	Cheddar (manu.)	Somerset	ARCH	Cu-alloy	100%	44	10	Taunton Museum 05.AA.2/386	Wilson 1979, 282, C.A. 49, fig. 95
113	A	Cheddar	Somerset	ARCH	Cu-alloy	95%	50	15.5	Taunton Museum 05.AA.2/374	Wilson 1979, 282, C.A. 95, fig. 95
114	A	Brandon	Suffolk	MD	Cu-alloy	85%, terminal damaged	33.3	13.7	PP	Suffolk SMR no. BRD 075
115	A	Brandon	Suffolk	ARCH	Cu-alloy,	10%, split-end fragment	14.3	12.9	S.C.C.A.S. sf BRD 018 8691	
116	A	Brandon	Suffolk	ARCH	Cu-alloy	80%, damaged split-end	41.4	8.5	S.C.C.A S. sf BRD 018 2320	
117	A	Brandon	Suffolk	ARCH	Cu-alloy	20%, split-end fragment	10.5	12.4	S.C.C.A.S. sf BRD 018 2325	
118	A	Chillesford	Suffolk	MD	Cu-alloy, enamel inlay	25%, terminal fragment only	28.9	15	PP	Suffolk SMR no. CHL Misc
119	A	Ipswich	Suffolk	ARCH	Cu-alloy	90%, damaged split-end	40.8	10.5	S.C.C.A.S. sf IAS 3104.442	Thomas forthcoming
120	A	Ipswich	Suffolk	ARCH	Cu-alloy, inlays?	85%, damaged split-end, corroded	61.6	16.6	S.C.C.A.S. sf IAS 5701.26	Thomas forthcoming
121	A	Ipswich	Suffolk	ARCH	Cu-alloy, enamel inlay	25%, terminal fragment.	33.8	14	S.C.C.A.S. sf IAS 8804.9	Thomas forthcoming

122	A	Ipswich	Suffolk	ARCH	Cu-alloy	90%, worn	36.6	11.9	S.C.C.A.S. sf IAS 3201.17	Thomas forthcoming
123	A	Ipswich	Suffolk	ARCH	Cu-alloy	85%, split-end damaged	32.3	13.1	S.C.C.A.S. sf IAS 3201.18	Thomas forthcoming
124	A	Wenhaston	Suffolk	MD	Cu-alloy, niello inlay	25%, terminal fragment	27.7	13	PP	Suffolk SMR no. WMH 004
125	A	Wetheringsett-cum Brockford	Suffolk	MD	Cu-alloy	95%	35.4	11.9	PP	Suffolk SMR no. WCB 016; West 1998, 134. 9
126	A	Winston	Suffolk	MD	Cu-alloy	85%, worn, split-end damaged	32	8.3	PP	Suffolk SMR no. WIN 020
127	A	Farnborough	Surrey	MD	Cu-alloy	90%, split-end damaged	41	11	PP	M.O.L. Early Dept. MD cat. no. 91
128	A	Jarrow	T & W	ARCH	Cu-alloy	10%, split-end fragment	16.3	15.4	JA 73 UT412	Info. c/o Rosemary Cramp
129	A	Bidford, Tower Hill	Warks	MD	Cu-alloy, niello inlay	95%	28	10	PP	Warks County Museum enquiry E 3195
130	A	Bidford-on-Avon	Warks	MD	Cu-alloy	90%	36	9	Warks County Museum ; A8042	Seaby & Wise 1995, 99; 60, fig. 2.2
131	A	Halford Bridge	Warks	MD	Cu-alloy, enamel inlay, gilding	75%, split-end damaged	35	13	PP	Warks County Museum enquiry E3536
132	A	Langley Burrel	Wilts	MD	Cu-alloy, glass eye inlay	85%, split-end missing	46.5	10.5	D.M. 1986.55	
133	A	Market Lavington	Wilts	MD	Cu-alloy	85%, front plate of split-end missing	39	11	D.M. 1976.185	
134	A	Netheravon	Wilts	MD	Cu-alloy	95%	45.7	16.8	PP	Info. c/o Nick Griffiths
135	A (manu.)	Sevington	Wilts	H	Ag	100%	43.2	11.9	B.M. 88, 7-19, 166	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 74; pl. XXX
136	A (manu.)	Sevington	Wilts	H	Cu-alloy	80%	36	12	B.M. 88, 7-19, 167	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 75, pl. XXX
137	A (manu.)	Sevington	Wilts	H	Cu-alloy	100%	29.4	7	B.M. 88, 7-19, 168	Wilson & Blunt 1961, 121, Wilson 1964a, cat. no. 76, pl. XXX
138	A (manu.)	Sevington	Wilts	H	Cu-alloy	75%, damaged split-end	32	12	B.M. 88, 7-19, 169	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 77, pl. XXX

139	A (manu.)	Sevington	Wilts	H	Ag	20%, split-end fragment	20.3	11.9	B.M. 88, 7-19, 170	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 78, pl. XXX
140	A (manu.)	Sevington	Wilts	H	Cu-alloy	100%	51.2	11.9	B.M. 88, 7-19, 164	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 72; pl. XXX
141	A (manu.)	Sevington	Wilts	H	Ag	100%	46.5	12	B.M. 88, 7-19, 165	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 73; pl. XXX
142	A	Shalbourne	Wilts	MD	Cu-alloy	90%	39	12	PP	D.M. Day Book 1494.8
143	A	Wootton Bassett	Wilts	MD	Cu-alloy	75%, split-end damaged	43.5	13.5	PP	D.M. Day Book 1660.3
144	A	Upton	Yorks, W	MD	Cu-alloy	75%, split-end missing	30	10.1	PP	Info. c/o David Haldenby
145	A	Ryther	Yorks, N	MD	Cu-alloy	75%, terminal missing, worn	25.7	9.7	PP	S.M. record card
146	A	Ryther	Yorks, N	MD	Cu-alloy	10%, back-plate fragment	12.3	14.6	PP	S.M. record card
147	A	Ryther	Yorks, N	MD	Cu-alloy	50%, terminal missing, worn.	25.1	13.1	PP	S.M. record card
148	A	Ryther	Yorks, N	MD	Cu-alloy	10% terminal fragment	18.9	9.9	PP	S.M. record card
149	A	Ryther	Yorks, N	MD	Ag	10%, terminal fragment	16.5	9	PP	S.M. record card
150	A	Ryther	Yorks, N	MD	Cu-alloy	5%, back-plate fragment	15.1	10.2	PP	S.M. record card
151	A	Ryther	Yorks, N	MD	Cu-alloy	20%, split-end missing	16.9	10.4	PP	S.M. record card
152	A	Ryther	Yorks, N	MD	Cu-alloy	25%, terminal fragment	20.1	7.4	PP	S.M. record card
153	A	Ryther	Yorks, N	MD	Cu-alloy	10%, split-end fragment	13.7	17.3	PP	S.M. record card
154	A	Ryther	Yorks, N	MD	Cu-alloy	10%, split-end fragment	11.8	11.5	PP	S.M. record card
155	A	Ryther	Yorks, N	MD	Cu-alloy	5%, back-plate fragment	9.8	14	PP	S.M. record card
156	A	Staxton, nr Scarborough	Yorks, N	MD	Cu-alloy	90%, damaged split-end	39.3	11	PP	A.R.C artefact sheet 3.1d

157	A	Whitby	Yorks, N	ARCH	Cu-alloy	90%, damaged split-end	40.6	10.7	B.M. Strickland loan W. 65	Wilson & Blunt 1961, 122; Wilson 1964a, cat. no. 127, pl. XL
158	A	Whitby	Yorks, N	ARCH	Cu-alloy	90%, damaged split-end	41.5	11	B.M. Strickland loan W. 66	Wilson & Blunt 1961, 122; Wilson 1964a, cat. no. 128, pl. XL
159	A	Whitby	Yorks, N	ARCH	Cu-alloy	70%, split-end missing	24.1	9.6	B.M. Strickland loan W. 67	Wilson & Blunt 1961, 122; Wilson 1964a, cat. no. 129, pl. XL
160	A	Manton	Yorks, S	MD	Cu-alloy, Ag bosses	95%	41.5	14.1	PP	S.M. record card
161	A	Elmshall, North	Yorks, W	MD	Cu-alloy, gilt	75%, worn, split-end missing	33	14.5	PP	Info. c o David Haldenby
162	A1	Hinwick	Beds	MD	Cu-alloy, niello/enamel inlay inlay	100%, corroded	39.5	10.3	Bedford Museum 17(8):20.11. 1989	
163	A1	Roxton	Beds	MD	Ag, niello	50%, split-end fragment	15.5	10	PP	Wingfield & Holgate 1991, 72, fig. 3.3
164	A1	Meols	Cheshire	OLD	Cu-alloy	90%, split-end damaged	30	7.6	G.M. (Potter Collection)	Bu'lock,.1960, 11, fig. 4d; Wilson & Blunt 1961, 121; Wilson 1964a, 109, Griffiths 1991, 287, cat. no. 105, M/ST 5, pl. 10
165	A1	Weardale	County Durham	MD	Cu-alloy, enamel inlay	85%, damaged split-end	-	-	PP	Info. c/o David Haldenby
166	A1	Cockington, Torquay	Devon	MD	Cu-alloy	90%, split-end damaged	40	11	Torquay Museum, A314	
167	A1	Unprov.	Essex	MD	Cu-alloy	95%	33.9	18.5	PP	Info. c o Peter Penfold
168	A1	Unprov.	H & W	MD	Cu-alloy	100%	43.5	13.6	PP	Info. c/o H & W.C.M.
169	A1	Royston	Herts	MD	Cu-alloy	85%, worn, damaged split-end,	35.6	12.5	PP	B.M. record
170	A1	Ferriby, South	Humb, S	MD	Cu-alloy, inlay	93%	37	11.5	PP	Info. c/o David Haldenby
171	A1	Shorne	Kent	MD	Cu-alloy	90%, split-end damaged	44	12	PP	M.O.L. catalogue of MD finds 9.4.91
172	A1	Scraptoft	Leics	MD	Cu-alloy, niello inlay	95%	51.9	10.3	PP	Leics SMR
173	A1	Carlton, North	Lincs	MD	Ag, niello inlay	25%, terminal fragment	17.1	11.5	S.M. 1990.127.1	

174	A1	Keelby	Lincs	MD	Cu-alloy, Ag inlay	65%, worn, terminal missing	24.4	8.3	PP	S.M. record card
175	A1	Lincs, North West	Lincs	MD	Cu-alloy, Ag inlay	85%, worn, split-end damaged,	37.6	8.7	PP	S.M. record card
176	A1	Beeston	Norfolk	MD	Cu-alloy	50%, upper fragment	19.7	11.9	PP	Norfolk SMR no. 12153
177	A1	Unprov.	Norfolk	MD	Cu-alloy	90%, front-plate of split-end missing	38.5	12.4	PP	Norfolk SMR
178	A1	Bishopstone	Sussex, E	MD	Cu-alloy, tinned	100%	47.5	12.9	PP	Graham-Campbell 1989, 244, fig. 27
179	A1	Bidford, Tower Hill	Warks	MD	Cu-alloy	95%	37	0	PP	Warks County Museum acc. card E 2880
180	A1	Shipston-on-Stour	Warks	MD	Cu-alloy, niello inlay	98%	32.5	10.7		Info. c/o Clive Warren
181	A1	Hutton Rudby	Yorks, N	MD	Cu-alloy	95%	35	12	PP	Info. c/o David Haldenby
182	A1	York	Yorks, N	MD	Cu-alloy	95%	46.4	14.8	Y.M. 714.48	Waterman 1959, fig. 10, no. 1; Wilson & Blunt 1961, 121; Wilson 1964a, 115; Moulden et. al. 1999, no. 185, fig. 111
183	A1	Nostell Priory, nr Wakefield	Yorks, W	MD	Cu-alloy	75%, split-end missing	30.6	14	PP	A.R.C artefact sheet
184	A1a	Roxton	Beds	MD	Cu-alloy	90%, split-end damaged	39	10	?	Wingfield & Holgate 1991, 72, fig. 3. 4
185	A1a	Wraysbury	Berks	ARCH	Cu-alloy, niello inlay	85%, front-plate of split-end missing.	35.4	8.2	Windsor & Wraysbury Arch. Soc.	Berks SMR no. 00036.00.011
186	A1a	Terrick, Ellesborough	Bucks	MD	Cu-alloy, ?Corinthium bronze rivet	95%, worn & stripped	48.5	9.5	A.Y.B.C.M.T.C. 1996.50.1	
187	A1a	Walton, Bucks	Bucks	ARCH	Cu-alloy, niello inlay	75%, split-end missing	36	15	A.Y.B.C.M.T.C.	Evison 1976a, 247, fig. 39, no. 1
188	A1a	Unprov.	Dorset	MD	Cu-alloy, Ag/ niello inlay	90%, split-end damaged	33.4	11	PP	B.M. record

189	A1a	Aberlady,	East Lothian, Scotland	MD	Cu-alloy	95%	56.2	12.8	N.M.S., E. 625.973 IG8	
190	A1a	Fingringhoe	Essex	MD	Ag, niello inlay	85%, damaged split-end	38.4	12.7	PP	Suffolk SMR
191	A1a	Unprov.	Essex	MD	Cu-alloy, niello inlay	95%	35	12	PP	Info. c/o Peter Penfold
192	A1a	Unprov.	Essex	MD	Cu-alloy, enamel inlay	95%	27	10	PP	Info. c/o Peter Penfold
193	A1a	Unprov.	Essex	MD	Ag, niello inlay	75%, damaged split-end	33.3	10.7	PP	Info. c/o Peter Penfold
194	A1a	Gloucester, Upton Lane	Gloucs	ARCH	Cu-alloy, enamel inlay	100%	36	9.7	G.C.M.	Heighway 1987, 79
195	A1a	Childswickham	H & W	MD	Cu-alloy	100%, bent	35	0	PP	Warks. acc. card E2815
196	A1a	Bedhampton	Hants	ARCH	Cu-alloy	95%	28.35	8	?	Webster & Cherry 1975, 222, pl. XIb
197	A1a	Cheriton	Hants	MD	Cu-alloy	90%, broken across rivet holes	53	11	PP	B.M. record
198	A1a	Hamwic	Hants	ARCH	Cu-alloy, niello inlay	95%	49	11.9	S.C.H.	Addyman and Hill 1969, 70, fig. 27, no. 4; Hinton 1996a, 41, 32 455, fig. 16
199	A1a	Weston	Herts	MD	Cu-alloy	90%, split-end damaged	34	10	PP	B.M. record
200	A1a	Weston	Herts	MD	Cu-alloy	60%, split-end missing	26.5	11.3	PP	Info. c/o David Haldenby
201	A1a	Hotham	Humb, N	MD	Cu alloy, Ag/ niello inlay	98%	50.1	16.6	PP	S.M. record card
202	A1a	Newbald, South	Humb, N	MD	Cu-alloy	45%, lower fragment	29.2	14.8	PP	Info. c/o Kevin Leahy, S.M.
203	A1a	Newbald, South	Humb, N	MD	Cu-alloy, niello inlay	70%, split-end missing	29	10	PP	Info. c/o Kevin Leahy, S.M.
204	A1a	Newbald, South	Humb, N	MD	Cu-alloy	85%, damaged split-end	46.2	13.4	PP	Info. c/o David Haldenby
205	A1a	Newbald, South	Humb, N	MD	Cu-alloy	50%, upper fragment	18	12	PP	Info. c/o Kevin Leahy, S.M.

206	A1a	Barnetby	Humb, S	MD	Cu alloy, no inlay	85%, split-end missing	38.6	8.4	S.M. not accessioned	
207	A1a	Ferriby, South	Humb, S	MD	Cu-alloy	100%, very worn	37.4	12.1	PP	S.M. record card
208	A1a	Unprov.	Leics	MD	Cu-alloy	90%, Top R.H. corner of split-end missing.	38.4	12.5	PP	Leics. SMR
209	A1a	Wymeswold	Leics	MD	Cu-alloy	75%, terminal missing	20.8	10.8	PP	Leics SMR
210	A1a	Wymeswold	Leics	MD	Cu-alloy	60%, terminal and split-end missing	30.6	8.2	PP	Leics SMR M9428
211	A1a	Bardney	Lincs	MD	Cu-alloy, niello inlay	80%, split-end missing	42.5	12.3	PP	S.M. Rec. Card
212	A1a	Haddington	Lincs	MD	Ag, gilt, niello inlay	25%, median fragment	12.8	10.2	PP	S.M. record card
213	A1a	North East Lincs	Lincs	MD	Cu-alloy, inlay	95%	36.2	9.1	PP	S.M. record card
214	A1a	nr Bardney	Lincs	MD	Cu-alloy, niello inlay	75%, split-end missing	40.5	10	PP	B.M. File
215	A1a	Rockland	Lincs	MD	Cu-alloy	100%	38.3	12.7	PP	S.M. record card
216	A1a	Sturton by Stow	Lincs	MD	Cu-alloy	95%	35	11.9	PP	S.M. record card
217	A1a	Torksey	Lincs	MD	Cu-alloy	98%	45.7	15	PP	S.M. record card
218	A1a	Torksey	Lincs	MD	Cu-alloy, Ag	95%	36.2	10	PP	S.M. record card
219	A1a	Torksey	Lincs	MD	Cu-alloy, metal inlay	90%, damaged split-end	33.5	8.5	PP	S.M. record card
220	A1a	Torksey	Lincs	MD	Cu-alloy, Ag inlay	80%, split-end missing	29.9	12.9	PP	S.M. record card
221	A1a	Welton le Marsh	Lincs	MD	Cu alloy	95%	28.7	8.9	PP	S.M. record card
222	A1a	Willoughby, nr Alford	Lincs	MD	Cu-alloy, Ag	95%	52.5	14.5	PP	S.M. record card
223	A1a	Elmham, North	Norfolk	ARCH	Ag	100%, worn	32	8.9	N.C.M	Wilson, 1980, 506, fig. 262, no. 3

224	Ala	Oxborough	Norfolk	MD	Cu-alloy	85%, split-end missing.	33.8	11.3	PP	Norfolk SMR no. 1021
225	Ala	Hickling	Notts	MD	Cu-alloy, enamel inlay	80%, split-end missing	44.9	19.5	PP	Leics SMR M. 9427
226	Ala	Abingdon	Oxon	ARCH	Cu-alloy	90%, broken across rivet holes	37	11	O.A.U. sf 155	
227	Ala	Santon Downham	Suffolk	MD	Cu-alloy	95%, inlay missing	32.9	8.9	PP	Norfolk SMR
228	Ala	Ewell, nr	Surrey	MD	Cu-alloy	80% Split-end missing	42	13.5	PP	Info. c/o Bourne Hall Museum, Surrey
229	Ala	Bishopstone	Sussex, E	MD	Cu-alloy	95%, worn	45.4	11	B.H.M.	Graham-Campbell 1989, 244, fig. 27
230	Ala	Alcester, Cherry Trees	Warks	MD	Cu-alloy	100%	30	8	PP	Warks. museum acc. card E 3037
231	Ala	Newbold-on-stour	Warks	MD	Cu-alloy	100%, worn	47	14.8	PP	B.M. File
232	Ala	Malton	Yorks, N	MD	Cu-alloy, niello inlay	95%	38.2	12.2	PP	S.M. record card
233	Ala	Wharram Percy	Yorks, N	ARCH	Cu-alloy, enamel inlay	95%	37.3	11.9	?	Goodall 1979, 111, fig. 55; no.12
234	Ala	York, 21-33 Aldwark	Yorks, N	ARCH	Cu-alloy, enamel inlay	75%, terminal and R.H. of split-end missing	33.5	16.5	Y.A.T. 1974.5; Context 698; SF 1760	Moulden et. al. 1999, no. 78, fig. 75a
235	Ala	Upton	Yorks, W	MD	Cu-alloy, niello inlay	75%, split-end missing	30	13	PP	Info. c/o David Haldenby
236	Alai	Keynsham, nr Bristol	Avon	ARCH	Cu-alloy, Ag inlay	95%	54	12.5	Keynsham Museum; replica in B.C.M. Q 23	
237 *2	Alai	Trewhiddle	Cornwall	H	Ag, niello inlay	100%	29.5	10.4	B.M. 80, 4-10, 13 & 14	Wilson & Blunt 1961, 81, pl. XXIII; Wilson 1964a, cat. nos 98 & 99, pl. XXXVII; Webster & Backhouse 1991; cat. no 246g
238	Alai	Cottam	Humb, N	MD	Cu-alloy	95%	35.9	12.1	PP	Haldenby 1990, 56, fig. 4.3
239	Alai	Shiptonthorpe	Humb, N	MD	Cu-alloy	100%, worn	33.9	12.7	PP	S.M. record card

240	Alai	Wymeswold	Leics	MD	Cu-alloy	80%, split-end missing	38.3	8.9	PP	Leics SMR M9428
241	Alai	Grantham	Lincs	MD	Cu-alloy, enamel inlay	95%	41	13	PP	Info. c o David Haldenby
242	Alai	Whitby	Yorks, North	ARCH	Ag, niello inlay	100%	39.3	11.6	B.M. Strickland loan; W.52	Peers & Radford 1943, 56, pl. XXVII; Wilson & Blunt 1961, 121; Wilson 1964, cat. no. 114, pl. XXXIX; Webster & Backhouse 1991, cat. no. 107b
243	Alai	Lindrick Common	Yorks, S	MD	Cu-alloy, niello inlay	100%	44	13.7	Rotheram Museum A/4/93	
244	Alaii	Rayleigh	Essex	MD	Ag, niello inlay	65%, split-end missing	39.3	15.6	PP	Info. c/o David Haldenby
245	Alaii	Newbald, South	Humb, N	MD	Cu-alloy	80%, split-end missing	34	12	PP	Info. c/o Kevin Leahy, S.M.
246	Alaii	Flixborough	Humb, S	ARCH	Cu-alloy, enamel inlay	95%	29.2	9	H.F.A. sf. FLX 89 0100	Leahy in Webster & Backhouse 1991, cat. no. 69 o; Thomas forthcoming
247	Alaii	Canterbury, Christchurch College	Kent	ARCH	Cu-alloy, Ag inlay	80%, back plate of split-end missing	40	11	C.M. 1993.204	
248	Alaii	Postling	Kent	OLD	Cu-alloy	95%	55	12.5	PP	Evison 1967, 282-3, pl. I
249	Alaii	City, Walbrook	London	OLD	Cu-alloy	97%	42.5	14.4	M.O.L 3991	Smith 1909, 164, fig. 23; Anon, Guildhall Catalogue 1908, pl. LXIX, no. 6
250	Alaii	Harling	Norfolk	ARCH	Cu-alloy, enamel inlay	95%	42.1	13.8	N.C.M. 43.989/4	Margeson 1995, 60, fig. 41, no. 69
251	Alaii	Hillington	Norfolk	MD	Cu-alloy, niello inlay	90%, front-plate of split-end missing	38.8	12.3	PP	Norfolk SMR no. 29913
252	Alaii	Stevenston Sands	Strathclyde, Scotland	OLD	Cu-alloy	95%	39	12.2	NMS, E. BMC 292	Callander 1932-33; 31, fig. 5, no. 1; Wilson & Blunt 1961, 121; Wilson 1964a, 112
253	Alaii	Green Hammerton	Yorks, N	MD	Cu-alloy, Ag	90%, damaged split-end	37	10.7	PP	A.R.C. artefact sheet

254	Alaii	Ryther	Yorks, N	MD	Cu-alloy, enamel inlay	60%, split-end damaged, terminal missing	24.2	13	PP	S.M. record card
255	Alaii	Ryther	Yorks, N	MD	Cu-alloy	90%, front-plate of split-end missing.	39.6	13.7	PP	S.M. record card
256	Alaii	Whitby	Yorks, N	ARCH	Cu-alloy, niello inlay	95%	41.6	12.2	B.M. Strickland loan W. 54	Peers & Radford 1943, 56, fig. 11, 10, pl. XXVIII, c, 38. Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 116, pl. XL
257	Alaii	Whitby	Yorks, N	ARCH	Cu-alloy	100%	33.5	11.4	B.M. Strickland loan W. 59	Peers & Radford 1943, 57, fig. 11, 7, pl. XXVIII, c, 43. Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 121, pl. XL
258	Alaii	York	Yorks, N	OLD	Cu-alloy	95%	36.2	12.2	Y.M. 713.48	Waterman 1959, 77, fig. 10, no. 4; Wilson & Blunt 1961, 121; Wilson 1964a, 116; Moulden et. al. 1999, no. 188, fig. 111
259	Alaii	Cottam	Humb, N	MD	Cu-alloy	95%	34.5	12.2	PP	Haldenby 1990, 58, no. 17, fig. 4
260	Alaii	Hayton	Humb, N	MD	Cu-alloy, niello inlay	100%	31	10.2	PP	S.M. record card
261	Alaii	Shiptonthorpe	Humb, N	MD	Cu-alloy	100%, worn	33.9	12.7	PP	S.M. record card
262	Alaii	Flixborough	Humb, S	ARCH	Cu-alloy, niello inlay	90%, damaged split-end, badly corroded	46.5	11.8	H.F.A. sf 3748	Thomas forthcoming
263	Alaii	Canterbury, St Martins Hill	Kent	ARCH	Cu-alloy, niello inlay	95%	44	13	C.M.; 1984. 354	Graham-Campbell 1987, 184, fig. 21
264	Alaii	Marton	Lincs	MD	Cu-alloy, enamel inlay	100%	39.9	12	PP	S.M. record card
265	Alaii	Beachamwell	Norfolk	MD	Cu-alloy	50%, back-plate of split-end missing	20	12	PP	Norfolk SMR no. 22964
266	Alaii	Ringstead Barrett	Norfolk	MD	Cu-alloy	90%, split-end damaged	45.9	12.2	PP	Norfolk SMR no.1115
267	Alaii	Ryther	Yorks, N	MD	Cu-alloy	75%, terminal worn, split-end missing	31.7	11.4	PP	S.M. record card

268	A1aiii	Ryther	Yorks, N	MD	Cu-alloy, Ag inlay	100%	34.5	12.2	PP	S.M. record card
269	A1aiii	Sherburn, nr Scarborough	Yorks, N	MD	Cu-alloy	98%	37.1	11.6	PP	A.R.C. artefact sheet 3.1
270	A1aiv	Blaise Castle Hill, Bristol	Avon	OLD/ ARCH	Cu-alloy, enamel inlay	95%	36	10	B.C.M. F 1938	Wilson & Blunt 1961, 120; Wilson 1964a; 100
271	A1aiv	Maiden Bower	Beds	OLD	Cu-alloy, niello inlay	95%	43.8	12.1	PP	Info. c/o Mike Farley, B.C.C.A.S.
272	A1aiv	Hauxton Mill	Cambs	OLD	Cu-alloy	75%, terminal missing	25.2	8.6	?	Lethbridge 1938, 327, no. 50, pl. XI, h
273	A1aiv	Talnotrie	Dumfries & Galloway, Scotland	H	Ag, niello inlay	95%, front-plate slightly damaged by L.H. rivet	41	13.5	NMS, E. FC 200	Callander 1932-3, 31, fig. 6; Wilson & Blunt 1961, 121; Wilson 1964a, 113, pl. IV d, Webster & Backhouse 1991, cat. no. 248a; Graham-Campbell 1995a, fig. 4
274	A1aiv	Royston	Herts	MD	Cu-alloy, niello inlay	100%	46.8	12.7	PP	B.M. record
275	A1aiv	Millington	Humb, N	MD	Cu-alloy	90%, split-end damaged	35.2	11.3	PP	S.M. record card
276	A1aiv	Newbald, South	Humb, N	MD	Cu-alloy	85%, split-end damaged	45.1	11.7	Hull Museum 138.1990.1	Info. c/o Kevin Leahy, S.M.
277	A1aiv	Newbald, South	Humb, N	MD	Cu-alloy	75%, terminal missing	25.5	12.6	PP	Info. c/o Kevin Leahy, S.M.
278	A1aiv	Newbald, South	Humb, N	MD	Cu-alloy, niello inlay	95%	35.3	12.7	PP	Info. c/o Kevin Leahy, S.M.
279	A1aiv	Pocklington	Humb, N	MD	Cu-alloy	95%	35.8	10.5	PP	Info. c/o David Haldenby
280	A1aiv	Cottam	Humb, S	MD	Cu-alloy	95%	40.8	9.4	PP	Haldenby 1990, 56, no. 2, fig. 4
281	A1aiv	Cottam	Humb, S	MD	Cu-alloy, enamel inlay	100%	36.5	12.2	PP	Haldenby 1994, 52, no. 1, fig.2
282	A1aiv	Scraptoft	Leics	MD	Cu-alloy	75%, split-end damaged	43.6	14.6	PP	Leic. SMR
283	A1aiv	Caistor	Lincs	MD	Cu-alloy	85%, damaged split-end	44.8	14.7	PP	S.M. record card
284	A1aiv	Owmby	Lincs	MD	Cu-alloy, enamel inlay	95%	59.8	17.5	A.M. not accessioned	B.M. record

285	A1aiv	Owston Ferry	Lincs	MD	Cu-alloy, inlay	90%, worn, damaged split end	48	16.3	PP	S.M. record card
286	A1aiv	Temple	London	ARCH	Cu-alloy, niello inlay	95%	46.4	13.4	M.O.L. TMP 96, sf 1	
287	A1aiv	Creake, North	Norfolk	MD	Cu-alloy	100%, worn	50	8.8	PP	Norfolk SMR no. 30240
288	A1aiv	Norwich, Castle	Norfolk	ARCH	Cu-alloy	95%	41.9	7.1	N.C.M. sf 221	Margeson & Williams 1985, 29, no. 3, fig. 24
289	A1aiv	Worksop	Notts	MD	Cu-alloy, enamel inlay inlay	95%	64	19.9	Retford Museum	
290	A1aiv	Souldern	Oxon	OLD	Cu-alloy	95%	42.3	11.5	A.M. on loan no.58	Bruce-Mitford, 1952-3, 236; Wilson & Blunt 1961, 121; Wilson 1964a, 112; Hinton 1974; cat. no. 31, pl. XVIII
291	A1aiv	Ipswich	Suffolk	ARCH	Cu-alloy	75%, terminal missing	41.9	19.5	S.C.C.A.S. sf 4601. 0001	West 1998, no. 96.17; Thomas forthcoming
292	A1aiv	Robins Wood, West Marden	Sussex, W	MD	Cu alloy	90%, split-end damaged	52	12	PP	C.D.M. acc. 1989
293 *2	A1aiv	Lilla Howe, Goathland	Yorks, N	H	Ag	95-100%	62.5	19.5	N.M.G.M., L.M. 12.6.79. 16 & 18	Leeds 1911; Wilson & Blunt 1961, 121; Wilson 1964a, 107; Roesdahl et al. 1981, 40, 66; Watkin & Mann 1981; Webster & Backhouse 1991, cat. nos 249 b & c
294	A1av	Asby	Cumbria	MD	Cu-alloy	95%	24.6	10.1	PP	B.M. record
295	A1av	Whitby	Yorks, N	ARCH	Cu-alloy	90%, damaged split-end	37.5	12.5	B.M. Strictland loan no. 53	Peers & Radford 1943, 56, fig. II, 6, pl. XXVII, c, 36; Wilson & Blunt, 121; Wilson 1964a, cat. no. 115, pl. XL
296	A1avi	Hedon	Humb, N	MD	Cu-alloy, enamel inlay	80%, terminal damaged	23.4	10.7	Hull Museum 137.1986.1	
297	A1avi	Barkby Thorpe	Leics	MD	Cu-alloy	100%	34.5	13.2	J.W.M. A17 1988	
298	A1avi	Ewerby	Lincs	MD	Cu-alloy, Ag, niello inlay	100%	26.6	10.9	PP	S.M. record card

299	Alavi	Harling	Norfolk	ARCH	Cu-alloy, enamel inlay	100%	33.4	11.7	N.C.M. 43. 989 (5)	Margeson 1995, 60, no. 70, fig. 41
300	Alavi	Felixstowe	Suffolk	MD	Cu-alloy	100%	46.7	15.4	I.M. 969.148	Wilson 1964a; 103, West 1998, 45.8
301	Alavii	Hale	Cheshire	MD	Cu-alloy	90%, split-end damaged	35	10.5	PP	Griffiths 1991, 309; no. 173, H/ST 1, pl. 16
302	Alavii	Asby	Cumbria	MD	Cu-alloy	85%, worn, damaged split-end	33.9	11.5	PP	B.M. record
303	Alavii	Market Weighton	Humb, N	MD	Cu-alloy	95%, worn	36.4	11.9	Hull Museum 913.1980.2	
304	Alavii	Newbald, South	Humb, N	MD	Cu-alloy	90%, damaged split-end	32.4	12.6	PP	Info. c/o Kevin Leahy, S.M.
305	Alavii	Newbald, South	Humb, N	MD	Cu-alloy	95%, worn	37	11	PP	Info. c/o Kevin Leahy, S.M.
306	Alavii	Ruskington	Lincs	MD	Cu-alloy, enamel inlay	85, split-end missing.	31.9	11.6	PP	S.M. record card
307	Alavii	Wooperton	Northumberld	MD	Cu-alloy	95%	37	11.7	PP	Bailey 1993, 86-7, fig. 1
308	Alavii	Goldsborough	Yorks, N	OLD	Cu-alloy	95%	37	11.6	Ripon Cathedral	Collingwood 1915, 179; Wilson & Blunt1961, 121; Wilson 1964a, 104; Bailey 1993, 89, fig. 2B
309	Alavii	Ryther	Yorks, N	MD	Cu-alloy, enamel inlay	75%, terminal missing	27.5	12.2	PP	S.M. record card
310	Alavii	Whitby	Yorks, N	ARCH	Cu-alloy	80%, damaged split-end	35.2	10.9	B.M. Strictland loan W.58	Peers & Radford 1943, 57, fig. II, 12, pl. XXVIII, c, 42; Wilson & Blunt, 121; Wilson 1964a, cat. no. 120, pl. XL; Bailey 1993, 89-90, fig. 2C
311	Alavii	York	Yorks, N	OLD	Cu-alloy	95%	37.3	11.7	Y.M. 717.48	Waterman 1959, fig. 10.3; Wilson & Blunt 1961, 121; Wilson 1964a, 116; Bailey 1993, 90, fig. 2E; Moulden et. al. 1999, no. 187, fig. 111
312	Alavii	Skelbrooke, nr Doncaster	Yorks, S	MD	Cu-alloy	95%	37	11.8	PP	Bailey 1993, 90, fig. 2D
313	Alavii	Thorpe Salvin	Yorks, S	MD	Cu-alloy	90%, front-plate missing	35.8	11.7	Retford Museum	

314	A1aviii	Wetheral, nr Carlisle	Cumbria	MD	Cu-alloy, niello inlay	90%, front-plate missing	51	15	T.H.M. 71-1986	Richardson, 1990; 40-2, no. 84, fig. 21
315	A1aviii	Coldingham Priory,	Borders, Scotland	OLD	Cu-alloy, niello inlay	95%	51.7	17	N.M.S., E. IG 15	Wilson & Blunt 1961, 121; Wilson 1964a, 32, 102, fig. 3; Proudfoot & Aliaga Kelly 1996, 6
316	A1avm	Highfields, Doncaster	Yorks, S	MD	Cu-alloy	75%, broken in two and split-end missing	43.2	16.9	Doncaster Museum 1994. 58	
317	A1avm	Thorpe Salvin	Yorks, S	MD	Cu-alloy, niello inlay, enamel inlay	98%, back-plate damaged	53.4	16.9	S.C.M. 1987.202	Hart 1989, 189-90, fig. 2
318	A1aix	Brougham Castle	Cumbria	MD	Cu-alloy	95%	34	12	PP	Info. c/o Dr Robert Philpott, N.M.G.M., L.M.
319	A1aix	Newbald, South	Humb, S	MD	Cu-alloy	100%	34	13	PP	Info. c/o Kevin Leahy, S.M.
320	A1aix	Winterton	Humb, S	MD	Cu-alloy, Ag	95%	34.3	12.1	PP	S.M. record card
321	A1aix	Unprov.	Unprov.	MD	Cu-alloy, corinthium bronze rivets, enamel inlay	100%	42	15	B.M. 1989.3-3.7	Stapleton et al. 1995, 386-7, fig. 2
322	A1aix	York	Yorks, N	OLD	Cu-alloy	75%, split-end missing	34.2	11.7	Y.M. 716.48	Waterman 1959, fig. 10, no. 5; Wilson & Blunt 1961, 121; Wilson 1964a, 115; Moulden et. al. 1999, no. 189, fig. 111
323	A1ax	Glenluce Sands	Dumfries & Galloway, Scotland	OLD	Cu-alloy	95%, very worn	41.4	14.8	N.M.S, E. unreg.	Callander 1932-3, 32, fig. 5 nos 2-4; Wilson & Blunt 1961, 121; Wilson 1964a, 104; Proudfoot & Aliaga-Kelly 1996, 6
324	A1ax	Cottam	Humb, N	MD	Cu-alloy	90%, damaged split-end	45.9	18	PP	Haldenby 1990, 58, no. 16, fig. 4
325	A1ax	Flixborough	Humb, S	ARCH	Cu-alloy	100%	36	9.3	H.F.A. sf 0554	Leahy in Webster & Backhouse 1991, cat. no. 69n; Thomas forthcoming
326	A1ax	Flixborough	Humb, S	ARCH	Cu-alloy	100%	32.7	10.2	H.F.A. sf 10785	Thomas forthcoming

327	Alax	Heacham	Norfolk	MD	Cu-alloy	95%	46.1	13.8	PP	Norfolk SMR no. 1439
328 *3	Alax	Rudham, West	Norfolk	MD	Ag, niello inlay	50-100%			PP	Norfolk SMR no. 28131, Gurney 1992, 368, fig. 3
329	Alax	Unprov.	Unprov.	OLD	Cu-alloy, niello inlay	95%	59.3	17.1	B.M. 1968, 4 2, 1	Info. c o Leslie Webster, B.M.
330	Alax	Whitby	Yorks, N	ARCH	Cu-alloy, niello inlay	98%	49.5	18	B.M. Stricland loan W.55	Peers & Radford 1943, 56.f, fig. II, 1, pl. XXVIII, c, 39; Wilson & Blunt, 121; Wilson 1964a, cat. no. 117, pl. XL
331	Alax	Whitby	Yorks, N	ARCH	Cu-alloy, niello inlay	95%	42.3	15.1	B.M. Strickland loan W.56	Peers & Radford 1943, 57, fig. II, 14, pl. XXVIII, c, 40; Wilson & Blunt, 121; Wilson 1964a, cat. no. 118, pl. XL
332	Alaxi	Appleby	Cumbria	MD	Cu-alloy, enamel inlay	100%, enamel degraded	40	14	PP	Info. c/o N.M.G.M., L.M.
333	Alaxi	Hamwic	Hants	ARCH	Cu-alloy, red enamel inlay	95%, bent	55	11.6	S.C.H.	Hinton 1993, no. 1; Hinton 1996a, 254/1149, fig. 16
334	Alaxi	Newbald, South	Humb, N	MD	Cu-alloy, enamel inlay	95%	39.4	14.7	PP	Info. c/o Kevin Leahy, S.M.
335	Alaxi	Newbald, South	Humb, N	MD	Cu-alloy	80%, split-end missing	32	14	PP	Info. c/o Kevin Leahy, S.M.
336	Alaxi	Barnetby	Humb, S	MD	Cu-alloy	100%	39.2	14.2	S.M. not accessioned	S.M. record card
337	Alaxi	Melton Ross	Humb, S	MD	Cu-alloy	100%	39.5	14.2	PP	S.M. record card
338	Alaxi	Welton-le-Marsh	Lincs	MD	Cu-alloy, Ag	100%	39.2	14.9	PP	S.M. record card
339	Alaxi	Unprov.	Norfolk	MD	Cu-alloy	95%			PP	Norfolk SMR
340	Alaxi	Bramford	Suffolk	MD	Cu-alloy, Ag	75%, split-end missing	38	17	PP	Suffolk SMR no BRF 028; West 1998, fig. 10.11
341	Alaxi	Wallsend	T & W	ARCH	Cu-alloy, inlay missing?	80%, split-end damaged, very corroded	38.3	15.5	Arbeia Roman fort	
342	Alaxi	Unprov.	Unprov.	MD	Cu-alloy	100%	40.6	14.4	PP	Recorded at Bonhams, London 13 05 97

343	Alaxi	Ryther	Yorks, N	MD	Cu-alloy, enamel inlay	80%, split-end missing	31	14.6	PP	S.M. record card
344	Alaxi	Whitby	Yorks, N	ARCH	Cu-alloy	95%	40.6	14.3	B.M. Strickland loan W. 60	Peers & Radford 1943, 57, fig. II, 4, pl. XXVIII, c, 44; Wilson & Blunt, 121; Wilson 1964a, cat. no. 122, pl. XL
345	Alaxii	Bedford, St Paul's Square	Beds	ARCH	Cu-alloy, niello inlay	100%	50	14.5	B.C. C.A.S, SPS sf 44	
346	Alaxii	Fenny Stratford	Bucks	MD	Ag, niello inlay	95%	41	10.5	B.M.	
347	Alaxii	Unprov.	Cambs	MD	Cu-alloy, niello inlay	93%	40.8	9.8	PP	Info. c/o David Haldenby
348	Alaxii	Youlgreave	Derbs	OLD	Cu-alloy, niello inlay	95%	42	9	B.M. 73; 6-2; 66	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 137, pl. XLII
349	Alaxii	Youlgreave	Derbs	OLD	Cu-alloy	95%, very worn	46	12.5	B.M. 73; 6-2; 67	Wilson & Blunt 1961, 121, Wilson 1964a, cat. no. 138, pl. XLII
350	Alaxii	Halstock	Dorset	OLD	Cu-alloy	95%	48.4	13	Lost	Cuming 1863, 215, pl. 16.6; Keen 1986, 196, no. 6, fig. 2
351	Alaxii	Thaxsted	Essex	MD	Cu-alloy, niello inlay, inset	90%, damaged split-end	39	10.9	PP	Wickenden 1993
352	Alaxii	Pixham Ferry	H & W	MD	Ag, niello inlay	80%, split-end missing	26	8	Birmingham Museum	B.M. record
353	Alaxii	Wroxeter	H & W	ARCH	Cu-alloy, gilt	100%	43.1	10.6	?	Barker et al. 1997, 194-5
354	Alaxii	Hamwic	Hants	ARCH	Cu-alloy, niello inlay	95%	57	13.6	S.C.H.	Hinton 1996a, 41, 169 2169, fig. 16
355	Alaxii	Royston	Herts	MD	Cu-alloy, niello inlay	95%	41.8	13.1	PP	B.M. record
356	Alaxii	Cottam	Humb, N	MD	Cu-alloy, Ag/niello inlay	50%, lower fragment	0	0	PP	Haldenby 1990, 54, no. 1, fig. 4
357	Alaxii	Cottam	Humb, N	MD	Cu-alloy	50%, upper fragment	24.4	14	PP	Haldenby 1994, 53, no. 3, fig. 2
358	Alaxii	Cottam	Humb, N	MD	Cu-alloy	95%, worn decoration	47.8	14	PP	Haldenby 1994, 53, no. 2, fig. 2

359	A1axii	Hotham	Humb, N	MD	Cu-alloy, niello inlay	50%, median fragment	24.3	14.2	PP	S.M. record card
360	A1axii	Newbald, South	Humb, N	MD	Cu-alloy, Ag/niello inlay	75%, damaged split-end	45.7	10.3	PP	S.M. record card
361	A1axii	Flixborough	Humb, S	ARCH	Cu-alloy	20% split-end fragment	10.7	11.8	H.F.A. sf 2556	Thomas forthcoming
362	A1axii	Flixborough	Humb, S	ARCH	Cu-alloy	95%	35.3	7.7	H.F.A. sf 14022	Thomas forthcoming
363	A1axii	Flixborough	Humb, S	ARCH	Ag	75%, worn, split-end missing	33	10.2	H.F.A. sf 10905	Thomas forthcoming
364	A1axii	Melton Ross	Humb, S	MD	Cu-alloy, Ag inlay	75%, split-end missing	37.9	8.6	PP	S.M. record card
365	A1axii	Winterton	Humb, S	MD	Cu-alloy	100%	44.5	9.9	PP	S.M. record card
366	A1axii	Richborough	Kent	OLD/ ARCH	Cu-alloy	100%	46	15	?	Smith 1850, pl. V; Wilson & Blunt 1961, 121; Wilson 1964a, 111
367	A1axii	Breedon-on-the-Hill	Leics	MD	Cu-alloy	100%, worn	37.8	9.2	PP	Leics SMR
368	A1axii	Wymeswold	Leics	MD	Cu-alloy	85%, split-end broken.	35.2	9.6	J.W.M. A4.1988	
369	A1axii	Caistor	Lincs	MD	Cu-alloy	60%, split-end missing	34.5	13.9	PP	S.M. record card
370	A1axii	Caistor	Lincs	MD	Cu-alloy, Ag inlay	70%, terminal missing, split-end damaged	29.9	10.11	PP	S.M. record card
371	A1axii	Hogsthorpe	Lincs	MD	Cu-alloy, Ag/niello inlay	75%, terminal missing	32.9	13.7	PP	S.M. record card
372	A1axii	Pointon	Lincs	MD	Cu-alloy, niello inlay	100%	40	9.7	PP	S.M. record card
373	A1axii	Scopwick	Lincs	MD	Cu-alloy, niello inlay	93%, damaged split-end	37.8	8.4	PP	S.M. record card
374	A1axii	Torksey	Lincs	MD	Cu-alloy	80%, split-end missing	45.1	12	PP	S.M. record card
375	A1axii	Torksey	Lincs	MD	Cu-alloy	100%	38.8	7.9	PP	S.M. record card

376	Alaxii	Welton-le-Marsh	Lincs	MD	Cu-alloy, Ag/ niello inlay	75%, terminal missing	33.2	13.6	PP	S.M. record card
377	Alaxii	Wigtoft	Lincs	MD	Cu-alloy, Ag inlay	95%	46	8	PP	S.M. record card
378	Alaxii	Billingsgate, Thames foreshaw	London	MD	Cu-alloy	95%	39	0	PP	M.O.L. MD finds reg. 1985
379	Alaxii	Bull Wharf	London	ARCH	Cu-alloy	95%	33.6	12.1	M.O.L. BUF 90	
380	Alaxii	Heacham	Norfolk	MD	Cu-alloy, Ag inlay	95%, L.H. corner of split-end damaged and inlay missing.	39.1	11	PP	Info. c/o Mr J. Bocking
381	Alaxii	Sporle	Norfolk	MD	Cu-alloy	97%	41.2	16.9	PP	Norfolk SMR no. 28809
382	Alaxii	Unprov.	Norfolk	MD	Cu-alloy	100%	50.2	24.4	PP	Norfolk SMR
383	Alaxii	Coker, East	Somerset	MD	Ag, niello inlay	100%	54	18.2	PP	Info. c o Lawrence Keen, Dorset C.C.A.S
384	Alaxii	Sully	South Glamorgan, Wales	MD	Cu-alloy	90%, damaged split-end	31	0	PP	Redknap 1992, 126, fig. 2
385	Alaxii	Icklingham	Suffolk	OLD	Cu-alloy	95%, niello missing	46.6	10.3	B.M. 1926; 11-16; 2	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 24, pl. XIX; West 1998; 56.8
386	Alaxii	Lakenheath	Suffolk	OLD	Cu-alloy, niello inlay	90%, damaged split-end	45	10	C.U.M.A.A. Z14964	Wilson 1964a, cat. no. 29, pl. XIX; West 1998; 112.7
387	Alaxii	Ewell, nr	Surrey	MD	Cu-alloy	95%	51.3	12.5	PP	Info. c/o Bourne Hall Museum
388	Alaxii	Woodcote, Little	Surrey	MD	Ag, niello inlay	100%	49	12	PP	M.o.L. md finds reg. 24.4.96
389	Alaxii	Alciston	Sussex, E	MD	Cu-alloy, Ag inlay	90%, damaged split-end	40.5	9.1	PP	Info. c o David Haldenby
390	Alaxii	Westmeston	Sussex, E	MD	Cu-alloy, niello inlay	100%	38.5	14	B.H.M. LEWSA 1985.20	Graham-Campbell 1988; 239, fig. 26; Webster & Backhouse 1991, cat. no. 193

391	A1axii	Unprov.	Unprov.	MD	Ag, niello inlay	100%	40.5	10.5	B.M. 1989; 3-3; 6	Webster & Backhouse 1991; cat. no. 191
392	A1axii	Unprov.	Unprov.	MD	Cu-alloy, niello inlay	95%	36.5	8	PP	B.M. record
393	A1axii	Calstone Wellington	Wilts	MD	Cu-alloy	95%	45.5	9.5	PP	D.M. Day Book 1655
394	A1axii	Ramsbury	Wilts	MD	cu-alloy	95%	36.5	10	PP	D.M. Day Book 1706
395	A1axii	Sevington	Wilts	H	Cu-alloy	100%	42.6	10.5	B.M. 88, 7-19, 163	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 71, pl. XXX
396	A1axii	Unprov.	Yorks, N	MD	Cu-alloy, Ag/ niello inlay	90%, damaged split-end	45.1	10.5	PP	S.M. record card
397	A1axiii	Exeter, Cathedral Close	Devon	ARCH	Cu-alloy, silvered	100%	35	12.3	?	Graham-Campbell 1983, 133, pl. 6a
398	A1axiii	Bielby, nr Pocklington	Humb, N	MD	Cu-alloy	85%, broken at split-end	0	0	PP	A.R.C. artefact sheet
399	A1axiii	Sancton	Humb, N	MD	Cu-alloy, Ag/niello inlay	100%	32.8	12.1	PP	S.M. record card
400	A1axiii	Finborough, Great	Suffolk	MD	Cu-alloy	100%	39	11.5	PP	Suffolk SMR no. FNG 007; West 1998; 16.2 (Buxhall misc)
401	A1axiii	Ipswich	Suffolk	ARCH	Cu-alloy, niello inlay	100%	31.2	9.3	S.C.C.A.S. IAS 4801. 0004	West 1998; 96.19; Thomas forthcoming
402	A1axiii	Whitby	Yorks, N	ARCH	Cu-alloy, niello inlay	95%	32	10.5	B.M. Stretland loan W.57	Peers & Radford 1943, 57, fig. II, 9, pl. XXVIII, c, 41; Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 119, pl. XL
403	A1axiii	York, Tanner Row	Yorks, N	OLD	Cu-alloy	85%, back-plate of split-end missing	30	11.1	Y.M. 1961.6.2	Wilson 1964b, 215, pl. XIXb; Moulden et. al. 1999, no. 176, fig. 107
404	A1axiv	Wendover	Bucks	MD	Ag	95%	61	16	A.Y.B.C.M. 1993.93.1	
405	A1axiv	Linton	Cambs	MD	Cu-alloy, enamel inlay	95%	44.2	11.2	S.W.M. 1984.235	Info. c/o David Haldenby

406	A1axiv	Soham	Cambs	MD	Cu-alloy, niello inlay, Ag rivets	95%	36	14.8	C.U.M.A.A. 1984; 4	Graham-Campbell 1985, 34, no. 197, fig.14; also as Lakenheath; West 1998, 112.6
407	A1axiv	Lincoln, St Paul in the Bail	Lincs	ARCH	Ag, niello inlay inlay	100%	41	11	C &C.M, L. LAU SP78Ag2	Webster in Webster & Backhouse 1991, cat. no. 192
408	A1axiv	Harling	Norfolk	ARCH	Cu-alloy, Ag plates, niello inlay	100%	45.9	14.3	N.C.M. 43.989 3	Margeson 1995, 60, no. 68, fig. 41
409	A1axiv	Heacham	Norfolk	MD	Cu-alloy, Ag rivets, niello inlay	95%	21.8	14.2	PP	Norfolk SMR no. 1439
410	A1axiv	Massingham, Great	Norfolk	MD	Ag, niello & glass eye inlays	100%	43.5	12.8	PP	Norfolk SMR no. 28960
411	A1axiv	Walpole-St-Peter	Norfolk	MD	Cu-alloy	95%	36.5	10	PP	Norfolk SMR no. 21341 7; Gurney 1990, 103, fig. 8, no. 8
412 *2	A1axiv	Bamburgh	Northumberld	ARCH	Cu-alloy	100%	60.1	19.2	Executors of the Rt. Hon. Lord Armstrong.	Webster in Webster & Backhouse 1991, cat. no. 195; x-ray reproduced in Hope-Taylor 1995.
413	A1axiv	Brandon	Suffolk	ARCH	Ag, niello inlay	85%, damaged split-end	47	14.4	S.C.C.A.S. sf BRD 018 5295	
414	A1axiv	Lewes	Sussex, E	MD	Ag	90%, broken across split-end	38.1	9.7	B.H.M.	Graham-Campbell 1989, 240, fig. 28
415	A1axiv	Unprov.	Unprov.	MD	Cu-alloy, niello inlay	100%	35.2	10.7	PP	Recorded at Bonhams, London 13 05/97
416	A1axiv	Unprov.	Unprov.	OLD	Cu-alloy	95%	48	15	B.M. 1896; 4-11; 164.	Wilson 1964a; cat. no. 144, pl. XLII
417 *2	A1axiv	Lilla Howe, Goatland	Yorks, N	H	Ag	100%	62.5	19.5	N.M.G.M., L.M. 12.6.79. 17 & 19	Leeds 1911; Wilson & Blunt 1961, 121; Wilson 1964a, 107; Roesdahl et al. 1981, 40, 66; Watkin & Mann 1981; Webster & Backhouse 1991, cat. nos 249 b & c
418	A1axiv	Unprov.	Yorks, N	MD	Ag, niello inlay	75%, split-end missing.	43.3	19.7	Y.M., not yet accessioned	B.M. record

419	A1axiv	York	Yorks, N	OLD	Cu-alloy	95%	40.5	14.2	Y.M. 715.48	Waterman 1959, 77; no 2; Wilson & Blunt 1961, 121; Wilson 1964a, 115; Moulden et. al. 1999, no. 186, fig. 111
420	A1axv	Wraysbury	Berks	ARCH	Cu-alloy	100%	54.3	10.8	Windsor & Wraysbury Arch. Soc.	Berks SMR no. 00036.00.011
421	A1axv	High Easter	Essex	MD	Ag, Au inlay	100%	47.8	15.5	PP	Info. c o David Haldenby
422	A1axv	Portchester	Hants	ARCH	Ag	100%	45.8	12.8	?	Hinton & Welch 1975, 216, no. 49, fig. 136, pl. XIXc
423	A1axv	Winchester	Hants	ARCH	Cu-alloy	95%	49	11.7	Minster Treasury	Evison 1962, Wilson 1964a, 114, Hinton & Welch 1975, 215, Hinton 1990b, 501, no 1064, fig. 126
424	A1axv	Winchester	Hants	ARCH	Cu-alloy	100%	44	9.2	W.C.M. sf 2857	Hinton 1990b, 502, no. 1067, fig. 126
425	A1axv	Evedon	Lincs	MD	Cu-alloy, niello inlay	100%, some of inlay missing	46.4	14.2	S.M. 1996; 136; 1	
426 *3	A1axv	Ashill	Norfolk	MD	Ag, niello inlay	50-95%	-	-	PP	Norfolk SMR no. 29390, Gurney 1994, 110
427	A1axv	Shernborne	Norfolk	MD	Cu-alloy, enamel inlay	60%, damaged split-end, terminal missing	-	-	PP	Norfolk SMR no. 23738
428	A1axv	Shropham	Norfolk	MD	Cu-alloy	100%	36.1	11.1	PP	Norfolk SMR no. 17722
429	A1axv	Stibbard	Norfolk	MD	Ag, niello inlay	100%	42.7	12.9	PP	Norfolk SMR no 25286
430 *2	A1axv	Ipsden Heath	Oxon	MD	Ag, Au filigree inlay	100%	57	17	A.M.	MacGregor 1994
431	A1axv	Unprov.	Suffolk	MD	Ag, niello & glass eye inlays	75%, split-end missing	42	13	M.H.M. 1985-122c	
432 *2	A1axv	Chichester	Sussex, W	MD	Cu-alloy	95%	34.3	13.2	C.D.M. 2070	
433	A1axvi	Hamwic	Hants	ARCH	Cu-alloy, enamel inlay	95%	44	11.9	S.C.H.	Addyman and Hill 1969, 70; fig 27; 3; Hinton 1996a, 41, 32/172, fig. 16

434	A1axvi	Weston	Herts	MD	Cu-alloy, niello inlay/enamel inlay	95%	44	13	PP	B.M. record
435	A1axvi	Cottam	Humb, N	MD	Cu-alloy	95%	51.2	10.6	PP	Haldenby 1994, 53, no.4, fig. 2
436	A1axvi	Stain	Lincs	MD	Cu-alloy	100%	46.2	12.56	PP	S.M. record card
437	A1axvi	Stain	Lincs	MD	Cu-alloy, white inlay	90%, damaged split-end	34.8	10	PP	S.M. record card
438	A1axvi	Bawsey	Norfolk	MD	Cu-alloy	50%, lower fragment	29.9	15.2	N.C.M.	Norfolk SMR no.21078 84.28
439	A1axvi	Bawsey	Norfolk	MD	Cu-alloy	100%	32.2	11	PP	Norfolk SMR no. 25962
440	A1axvi	Barbury, Uffcott Down, Wroughton	Wilts	MD	Cu-alloy, Ag/niello inlay	95%	36.5	9.7	Swindon Museum; B1977/323	
441	A1axvi	Unprov.	Unprov.	MD	Cu-alloy	100%	66	17	B.M. 1990; 7-6, 5	
442	A1axvii	Bradwell	Essex	OLD/ ARCH	Cu-alloy, niello inlay	95%	43.5	13.6	C & E. M.	Report on C. & E.M. 1947 8, 27, pl. IX, 5; Wilson & Blunt 1961, 121; Wilson 1964a, 100, 106
443	A1axvii	Kingsholm	Gloucs	OLD	Cu-alloy	75%, terminal missing, damaged split-end	37	16	G.C.M.	
444	A1axvii	Hamwic	Hants	ARCH	Cu-alloy, niello inlay	95%	41	12.2	S.C.H.	Hinton 1996a, 41, 169 1270; fig. 16
445	A1axvii	Unprov.	East Anglia	MD	Cu-alloy	85%, terminal damaged, back-plate of split-end missing.	50.7	17.5	PP	Recorded at Bonhams, London
446	A1axviii	Bottisham	Cambs	MD	Cu-alloy	95%	37	10.8	PP	Graham-Campbell 1985, 34-5, no. 200, fig. 14
447	A1axviii	Ashby-de-la-launde	Lincs	MD	Cu-alloy, niello inlay	75%, split-end missing	32.2	13.3	S.M. 1996.134	
448	A1axviii	Caistor	Lincs	MD	Cu-alloy, Ag inlay	90%, front-plate of split-end missing	40.1	14.9	PP	S.M. record card

449	A1axviii	Torksey	Lincs	MD	Cu-alloy, niello & glass eye inlays	95%	20	10	S.M. not accessioned.	
450	A1axviii	Torksey	Lincs	MD	Cu-alloy	95%	35.8	6.82	PP	S.M. record card
451	A1axviii	Torksey	Lincs	MD	Cu-alloy, Ag inlay	90%, front-plate of split-end missing	33.9	7.1	PP	S.M. record card
452	A1axviii	Creake, North	Norfolk	MD	Cu-alloy	95%, inlay missing?	53.7	14.5	PP	Norfolk SMR no. 11707
453	A1axviii	Rocklands	Norfolk	MD	Cu alloy, Ag inlay	100%	35.6	10.6	PP	Norfolk SMR
454	A1axviii	Cheddar	Somerset	ARCH	Cu-alloy	100%	28	13.5	Taunton Museum 05.AA.2/304	Wilson 1979, 282, C.A. 14, fig. 95
455	A1axviii	Unprov.	Unprov.	MD	Cu-alloy	80%, split-end missing	32.4	9.8	PP	Recorded at Bonhams, London
456	A1axix	Stowe	Bucks	MD	Cu-alloy, niello inlay	95%	42	9	A.Y.B.C.M. 1992.93.1	
457	A1axix	Repton	Derbs	ARCH	Cu-alloy	95%	0	0	?	Info. c/o Martin Biddle
458	A1axix	Aberlady	East Lothian, Scotland	?	Cu-alloy	95%	44.9	10.2	NMS, E. 625.973, IG12	
459	A1axix	Walton-at-Stone	Herts	MD	Cu-alloy	85%, very worn, split-end broken	38	10	PP	B.M. record
460	A1axix	Weston	Herts	MD	Ag, niello inlay	45%, split-end fragment	14.5	11	PP	B.M. record
461	A1axix	Newbald, South	Humb, N	MD	Cu-alloy, niello inlay	85%, split-end missing	40.6	15.5	Hull Museum 138 1980 2	Info. c/o Kevin Leahy, S.M.
462	A1axix	Barkby Thorpe	Leics	MD	Cu-alloy, enamel inlay	95%	37.5	10	J.W.M. A69. 1990	
463	A1axix	Wymsewold	Leics	MD	Cu-alloy	90%, Top R.H corner of split-end missing	39.4	10.6	J.W.M. A2.1988	
464	A1axix	Kelsey, South	Lincs	MD	Cu-alloy	60%, split-end missing	31.9	7.5	S.M. 1995.030	

465	A1axix	Mablethorpe	Lincs	MD	Cu-alloy, Ag inlay	60%, damaged split-end, terminal missing	46.5	15.6	PP	S.M. record card
466	A1axix	North-East Lincs	Lincs	MD	Cu-alloy	95%	36	9.1	PP	S.M. record card
467	A1axix	Syon Reach, Kew	London	MD	Cu-alloy	85%, split-end damaged	39.5	12	M.O.L. 81.571	
468	A1axix	Bawsey	Norfolk	MD	Cu-alloy, enamel inlay	100%	33.7	10	PP	Norfolk SMR no. 12364/19 3; Webster in Webster & Backhouse 1991, cat. no. 188d
469	A1axix	Field Dalling	Norfolk	MD	Cu-alloy	90%, split-end damaged	46	11.2	PP	Norfolk SMR no. 24638
470	A1axix	Bulwick	Northants	MD	Cu alloy, tinned	95%	41	9	PP	Dallas 1975
471	A1axix	Barham	Suffolk	MD	Cu-alloy	85%, terminal missing	37	13.5	PP	Suffolk SMR no. BRH 027
472	A1axix	Blakenham, Great	Suffolk	MD	Cu-alloy	45%, lower fragment	24.1	11.7	PP	Suffolk SMR no. BLG 008; West 1998, 10.1
473	A1axix	Ipswich	Suffolk	ARCH	Cu-alloy, enamel & blue glass eye inlays	90%, damaged split-end, broken in two, corroded	55.5	13	S.C.C.A.S. sf IAS 3104. 1548	Thomas forthcoming
474	A1axix	Bidford-on-Avon	Warks	MD	Cu-alloy	95%	37	10	PP	Seaby & Wise 1995, 60
475	A1axix	Trowbridge	Wilts	ARCH	Cu-alloy, enamel inlay	90%, broken across rivet holes	28.8	10.1	?	Graham & Davies 1993, 83, fig. 29.4
476	A1axix	Unprov.	Wilts	MD	Cu-alloy, enamel inlay	85%, split-end damaged	41.5	10	D.M. Collections, 1993.539	
477	A1axx	Unprov.	East Anglia	MD	Ag, gilt	85%, split-end missing	32.1	8.8	PP	Recorded at Bonhams, London
478	A1axx	Congham	Norfolk	MD	Cu-alloy, niello & glass eye inlays	95%	56.8	15.2	PP	Norfolk SMR no. 25765; Recorded at Bonhams, London
479	A1axx	Brandon	Suffolk	ARCH	Cu-alloy, niello inlay	95%	56.6	17.1	S.C.C.A.S. sf BRD 018 2341	

480	A1b	Bottisham	Cambs	MD	Cu-alloy	40%, terminal fragment	25	12.9	PP	Graham-Campbell 1985, 34-5, no. 199, fig. 14
481	A1b	Stonea	Cambs	ARCH	Cu-alloy, niello inlay	95%, broken in two	47	17.7	?	Webster 1996; 658-9
482	A1b	Meols	Cheshire	OLD	?	75% half of front plate missing	34	10	Lost	Hume, 1863, 125, pl. XI, 15; Bu'lock 1960, 11, fig. 4a; Wilson & Blunt 1961, 121; Wilson 1964a, 109; Griffiths 1991, cat. no. 106, M ST 6, pl. 10
483	A1b	Royston	Herts	MD	Cu-alloy	100%, worn	40.4	13.8	PP	B.M. record
484	A1b	Torksey	Lincs	MD	Ag, niello inlay	60%, half of front plate, terminal and back-plate missing	27	14.2	S.M. 1991.459.1	
485	A1b	Bawsey	Norfolk	MD	Cu-alloy	45%, terminal fragment	19.4	15.5	N.C.M.	Norfolk SMR no. 12364/2. 6
486	A1b	Unprov.	Unprov.	MD	Ag, niello inlay, Ag rivet	75%	28	11.2	PP	Recorded at Bonhams, London 13/05/97
487	A1b	Bidford-on-Avon	Warks	MD	Cu-alloy	50%, terminal fragment	30	16	PP.	Seaby & Wise 1995, 60, fig. 2.4
488	A1b	Bidford-on-Avon	Warks	MD	Cu-alloy	-	28	10	PP	Seaby & Wise 1995, 60
489	A1bi	Lowbury Hill, Aldworth	Berks	MD	Cu-alloy, niello inlay	95%	34.5	10.5	PP	B.M. record
490	A1bi	Wraysbury	Berks	ARCH	Cu-alloy, niello inlay	80%, worn, split-end missing	45	10.1	Windsor & Wraysbury Arch. Soc.	Berks SMR no. 00036.00.011
491	A1bi	Bledlow area	Bucks	MD	Cu-alloy	95%, bent	48.5	12	A.Y.B.C.M. 1995.119.1	
492	A1bi	Princes Risborough	Bucks	MD	Cu-alloy	90%	32.2	7.5	A.Y.B.C.M. 1983.275.1	
493	A1bi	Shenley Church End	Bucks	MD	Cu-alloy	95%, worn	33.5	10	PP	Bucks SMR no. 3574/2
494	A1bi	Shenley Church End	Bucks	MD	Cu-alloy	100 %	35.8	8	PP	Bucks SMR no. 3574

495	Albi	Youlgreave	Derbs	OLD	Cu-alloy	95%	45	9.9	B.M. 73, 6-2, 64	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 136, pl. XLII
496	Albi	Glenluce Sands	Dumfries & Galloway, Scotland	OLD	Cu-alloy	85%, split-end damaged	48	12	N.M.S., E. unreg	Callander 1932-3, 32, fig. 5 nos 3; Wilson & Blunt 1961, 121; Wilson 1964a, 104; Proudfoot & Aliaga-Kelly 1996, 6
497	Albi	Billericay	Essex	MD	Cu-alloy	90%, damaged split-end, terminal corroded	41	10	PP	Info. c/o Nick Wickenden, E.C.C.A.S, Chelmsford
498	Albi	Andover	Hants	MD	Cu-alloy	95%	32.7	10.2	PP	Hinton 1977
499	Albi	Royston	Herts	MD	Cu-alloy	90%, damaged split-end	40	8.9	PP	B.M. record
500	Albi	Cottam	Humb, N	MD	Cu-alloy, enamel inlay	95%	34.6	8.9	PP	Haldenby 1990, 56, no. 4, fig.4
501	Albi	Cottam	Humb, N	MD	Cu-alloy, enamel inlay	90%, damaged split-end	37.7	8.4	PP	Haldenby 1990, 56, no. 5, fig.4
502	Albi	Newbald, South	Humb, N	MD	Cu-alloy, Ag/ niello inlay	95%	35.1	8.8	PP	Info. c/o Kevin Leahy, S.M.
503	Albi	Melton Ross	Humb, S	MD	Cu-alloy, Ag rivets, niello inlay	95%	37.2	6.9	PP	S.M. record card
504	Albi	Bardney	Lincs	MD	Cu-alloy	95%	46	12.2	PP	S.M. record card
505	Albi	Caistor	Lincs	MD	Cu-alloy	95%	41.1	7.9	PP	S.M. record card
506	Albi	Carlton, North	Lincs	MD	Cu-alloy	100%	47.1	10.4	PP	S.M. record card
507	Albi	Ketsby	Lincs	MD	Cu-alloy	90%, split-end damaged in antiquity.	32.2	7.2	S.M. 1993.155.1	
508	Albi	Rowston	Lincs	MD	Cu-alloy	95%	34	8.9	PP	S.M. record card
509	Albi	Scampton	Lincs	MD	Cu-alloy	85%, front-plate of split-end missing	48.88	8.66	PP	S.M. record card
510	Albi	Scopwick	Lincs	MD	Cu-alloy, Ag	93%, damaged split-end	41.68	9.78	PP	S.M. record card

511	Albi	Stamford	Lincs	MD	Cu-alloy, blue glass eye inlays	100%	41	13	PP	Info. c/o David Haldenby
512	Albi	Walcot	Lincs	MD	Cu-alloy	85%, split-end damaged	47.4	10.7	PP	S.M. record card
513	Albi	Lopham, North	Norfolk	MD	Cu-alloy	90%, split-end damaged	55.9	9.9	PP	Norfolk SMR no. 30359
514	Albi	Walpole-St-Peter	Norfolk	MD	Cu-alloy, niello inlay	70%, split-end missing	24.6	9.9	PP	Norfolk SMR no. 21341.1; Gurney 1990, 103, fig. 8, no. 2
515	Albi	Towcester	Northants	MD	Cu-alloy	95%	52	14.7	PP	Info. c/o David Haldenby
516	Albi	West Burton	Notts	MD	Cu-alloy	75% Split-end missing	33.4	12	Lost	Retford Museum acc. card
517	Albi	Tong	Shropshire	MD	Cu-alloy, enamel inlay	80%, split-end missing	32	10	PP	Info. c/o David Haldenby
518	Albi	Burgate	Suffolk	MD	Cu-alloy	70% very worn, split-end damaged	28	9.6		Suffolk SMR no. BUR 021
519	Albi	Chelmondiston	Suffolk	MD	Cu-alloy	95%	65.7	11.9	I.M. 1980.128	Suffolk SMR no. CHL Misc; West 1998, 17 4
520	Albi	Ipswich	Suffolk	ARCH	Cu-alloy	95%	37.2	18.2	S.C.C.A.S. IAS 4601.0491	West 1998, 96.16; Thomas forthcoming
521	Albi	Unprov.	Suffolk	MD	Cu-alloy, enamel inlay	95%, broken in two medially	59.4	16	M.H.M. not accessioned	
522	Albi	Wenhaston	Suffolk	MD	Cu-alloy	90%, broken across rivet holes	31.8	11	PP	B.M. record
523	Albi	Whepstead	Suffolk	MD	Cu-alloy	95%	43.1	13.8	PP	S.A.U File
524	Albi	Chichester, nr	Sussex, W	MD	Cu-alloy, Ag/niello inlay	95%	34	11	PP	Info. c/o David Haldenby
525	Albi	Calne	Wilts	MD	Cu-alloy	100%	33	11	PP	D.M. Day Book 1798
526	Albi	Ogbourne-St-George	Wilts	MD	Cu-alloy	80%, worn, split-end missing	54	9.5	Swindon Museum B1992 6.2	
527	Albi	Ryther	Yorks, N	MD	Cu-alloy	90%, worn	37.3	11.2	PP	S.M. record card

528	Albi	Wharram Percy	Yorks, N	ARCH	Cu-alloy	95%	49.4	10.3	?	Goodall 1987a, 171, fig. 191, no. 9
529	Albii	Buckingham	Bucks	MD	Cu-alloy, niello inlay	93%, damaged split-end	46	16.9	PP	Info. c/o David Haldenby
530	Albii	Lode	Cambs	MD	Cu-alloy, niello inlay	95%	52	15.6	PP	Graham-Campbell 1982, 145, fig. 3 no. 3; 1985, 34, no. 199, fig. 14
531	Albii	Unprov.	Essex	MD	Cu-alloy, niello inlay	95%	31.6	14		Info. c/o Peter Penfold
532	Albii	Stratton, nr Cirencester	Gloucs	OLD	Ag	95%	49	14.5	B.M. 79; 12-22	Smith 1923, 106, fig. 131, no. 3; Wilson & Blunt 1961, 121, Wilson 1964a, cat. no. 82, pl. XXX
533	Albii	Hamwic	Hants	ARCH	Cu-alloy, niello inlay	95%	38	10	S.C.H.	Hinton 1996a, 41, 26/181, fig. 16
534	Albii	Unprov.	Herts	MD	Ag, niello and glass eye inlays	97%	59	25.3	B.M. 1984; 1-4; 1	Webster in Webster & Backhouse 1991; 234 cat. no. 194
535	Albii	Manton	Humb, S	MD	Cu-alloy	95%	36.5	13.3	PP	S.M. record card
536	Albii	Dymchurch	Kent	OLD	Cu-alloy, Ag, niello inlay.	90%	48.5	13	S.C.M. J.93.1300	Wilson & Blunt 1961, 121; Wilson 1964a, 28, 103, fig. 1
537	Albii	St Mildred's Bay, Thanet	Kent	MD	Ag	95%	44.1	12.5	C.M.	Graham-Campbell 1982, 145, fig. 3.1
538	Albii	Stowting or Faversham	Kent	OLD	Cu-alloy	75% corroded, split-end missing	44	14.2	C.M. 2182 (ex John Brent coll.)	Graham-Campbell 1982, 145, fig. 3.2
539	Albii	Cuerdale, nr Preston	Lancs	H	Ag	95%	51.5	16.2	B.M. 41, 7-11, 456	Hawkins 1847, 190, fig. 90; Wilson & Blunt 1961, 121; Wilson 1964a; cat. no.13, pl. XVII; Graham-Campbell 1992, 109
540	Albii	Goadby Marwood	Leics	MD	Cu-alloy	95%	47.7	12	PP	B.M. record
541	Albii	Caistor	Lincs	MD	Cu-alloy, Ag/niello inlay	100%	40.4	10.7	PP	S.M. record card
542	Albii	Field Dalling	Norfolk	MD	Cu-alloy	93%, split-end damaged	45.2	12.2	PP	Norfolk SMR no. 24638

543	Albii	Quidenham	Norfolk	MD	Cu-alloy	95%	51.4	14.3	PP	Norfolk SMR no. 31252
544	Albii	Long Wittenham	Oxon	MD	Cu-alloy, Ag rivet	100%, worn	48.7	12.4	A.M. 1979.984	Graham-Campbell 1982, 146, fig. 3, no. 4
545	Albii	Woodeaton	Oxon	OLD	Cu-alloy, enamel inlay	85% front plate missing beneath rivet holes	36.9	12	A.M. 1896-1908	Wilson & Blunt 1961, 121; Wilson 1964a, 115; Hinton 1974, cat. no. 37, pl. XIX
546	Albii	Robins Wood, West Marden	Sussex, W	MD	Cu-alloy, niello inlay	97%	40	13	PP	C.D.M. record
547	Albii	Amesbury	Wilts	MD	Cu-alloy	95%	43	13	PP	S.S.W.M. record
548	Albii	Unprov.	Yorks, N	MD	Cu-alloy, niello inlay, blue enamel inlay eyes	100%	55	12	PP	S.M. record card
549	Albii	Marr, nr Doncaster	Yorks, S	MD	Cu-alloy, enamel inlay	80%, split-end missing	44	14.3	Doncaster Museum 1991.84	
550	Albii	West Wycombe	Bucks	MD	Cu-alloy, enamel inlay	95%	49	14	A.Y.B.C.M. 1995.109.2	
551	Albii	West Wycombe	Bucks	MD	Cu-alloy, niello inlay	100%	54.7	20.1	A.Y.B.C.M. 1988.92 5	
552	Albii	Royston	Herts	MD	Cu-alloy, niello inlay	100%, broken in two	49.1	16.7	PP	B.M. record card
553	Albii	Bardney	Lincs	MD	Cu-alloy, Ag/niello inlay	100%	38.2	11.8	PP	S.M. record card
554	Albii	Ringstead Barrett	Norfolk	MD	Cu alloy, niello inlay	100%, inlay missing	45.7	11.3	PP	Norfolk SMR no. 1270
555	Albii	Knettishall	Suffolk	MD	Cu-alloy	100, very worn	46	14.5	PP	Suffolk SMR no. KNE 019
556	A2	Chelmsford, area	Essex	MD	Cu alloy	95%	32	10	PP	B.M. record
557	A2	Wratting, Great	Essex	MD	Cu-alloy	75%, split-end missing	33.9	12.7	PP	Suffolk SMR record
558	A2	Royston	Herts	MD	Cu-alloy	90%, damaged split-end	27.5	7.8	PP	B.M. record
559	A2	Royston	Herts	MD	Cu-alloy	95%, worn	38.9	12.6	PP	B.M. record

560	A2	Flixborough	Humb, S	ARCH	Cu-alloy	20%, split-end fragment	12.5	10.4	H.F.A. sf 10435	Thomas forthcoming
561	A2	Thwing	Humb, N	ARCH	Cu-alloy	95%	24.2	7.6	PP	Info. c/o Terry Manby
562	A2	Thwing	Humb, N	ARCH	Cu-alloy	95%	36.6	7.3	PP	Info. c/o Terry Manby
563	A2	Alkborough	Humb, S	MD	Cu-alloy	60%, terminal missing	33	17.8	PP	Info. c/o David Haldenby
564	A2	Ferriby, South	Humb, S	MD	Cu-alloy	95%	33.5	10.5	PP	S.M. record card
565	A2	Brocklesby	Lincs	MD	Cu-alloy	95%	52.2	9.12	PP	S.M. record card
566	A2	Caistor, area	Lincs	MD	Cu-alloy	95%	35	11	PP	S.M. record card
567	A2	Louth	Lincs	MD	Cu-alloy	90%, damaged split-end	53	12	S.M. not accessioned	
568	A2	Louth,	Lincs	MD	Cu-alloy, inlay	75%, v. worn, damaged split end	39	14.5	S.M. not accessioned	
569	A2	Ravendale, West	Lincs	MD	Cu-alloy	90%, worn, split-end repaired in antiquity	36	8	PP	S.M. record card
570	A2	Stain	Lincs	MD	Cu-alloy	95%	28	8	PP	S.M. record card
571	A2	Fring	Norfolk	MD	Cu-alloy	20%, median fragment	35.4	24	PP	Norfolk SMR no. 11775
572	A2	Pentney	Norfolk	MD	Cu-alloy	90%, front-plate of split-end missing.	32.9	12.9	N.C.M. 143.982	Norfolk SMR no. 18160
573	A2	Yarnton	Oxon	ARCH	Cu-alloy	25%, split-end fragment	13.8	15.5	O.A.U. sf 13	Thomas, forthcoming
574	A2	Templecombe, Wincanton	Somerset	MD	Cu-alloy, red enamel inlay inlay	90%, damaged split end	36	14	PP	Info. c/o David Haldenby
575	A2	Cornard, Little	Suffolk	MD	Cu-alloy	75% worn, split-end damaged	43.2	14.3	PP	Suffolk SMR no. COL 012
576	A2	Unprov.	Suffolk	MD	Cu-alloy, enamel inlay	95%	44	11	M.H.M. 1984-87	

577	A2	Waldringfield, Great	Suffolk	MD	Cu-alloy	95%	30.8	11	PP	M.H.M. record
578	A2	Wetheringsett cum Brockford	Suffolk	MD	Cu-alloy	85%, front-plate of split-end missing	30.1	7.2	PP	Suffolk SMR no. WCB 016
579	A2	Ryther	Yorks, N	MD	Cu-alloy	85%, front-plate missing	38.3	10.4	PP	S.M. record card
580	A2	Ryther	Yorks, N	MD	Cu-alloy	75%, front-plate of split-end missing	40.9	10	PP	S.M. record card
581	A2	Ryther	Yorks, N	MD	Cu-alloy, Ag inlay	40%, lower fragment	15	10.1	PP	S.M. record card
582	A2a	Peterborough	Cambs	OLD	Cu-alloy	95%	50	14	Peterborough Museum	
583	A2a	Royston	Herts	MD	Cu-alloy	90%, damaged split-end	45.5	14	PP	B.M. record
584	A2a	Royston	Herts	MD	Cu-alloy	95%	39.1	11.6	PP	B.M. record
585	A2a	Weston	Herts	MD	Cu-alloy	90%, damaged split-end	43	12.5	PP	B.M. record
586	A2a	Cottam	Humb, N	MD	Cu-alloy, enamel inlay	35%, lower fragment	25.9	11.4	PP	Haldenby 1990, 56, no. 10, fig. 4
587	A2a	Cottam	Humb, N	MD	Cu-alloy, Ag inlay	100%	49.2	16.5	PP	Haldenby 1992, 27, no. 6, fig. 3
588	A2a	Cottam	Humb, N	MD	Cu-alloy	93%, front-plate of split-end missing	37.9	9.9	PP	Haldenby 1990, 56-7, no. 9, fig. 4
589	A2a	Thwing	Humb, N	ARCH	Cu-alloy	90%, damaged split-end	52.6	10.6	?	Info. c/o Terry Manby
590	A2a	Wymeswold	Leics	MD	Cu-alloy	90%, damaged split-end	51.2	15.1	PP	Leics SMR
591	A2a	Edlington	Lincs	MD	Cu-alloy	85%, worn, split-end repaired in antiquity.	32.5	10.2	PP	S.M. record
592	A2a	Pointon	Lincs	MD	Cu-alloy, enamel inlay	90%, bent at split-end	56	17.7	PP	S.M. record card
593	A2a	Willoughby	Lincs	MD	Cu-alloy, silvered or tinned	90%, damaged split-end	53.3	15.1	PP	S.M. record card

594	A2a	Congham	Norfolk	MD	Cu-alloy, enamel inlay	60%, missing terminal, front-plate of split-end missing	29.3	8.5	PP	Norfolk SMR no. 25765
595	A2a	Creake, North	Norfolk	MD	Cu-alloy	75%, terminal and split-end missing	34.6	15.7	PP	Norfolk SMR no. 11707
596	A2a	Walton, West	Norfolk	MD	Cu-alloy	30%, median fragment	20.8	16.6	PP	Norfolk SMR
597	A2a	Burford	Oxon	MD	Cu-alloy	90%, damaged split-end	52.5	16.5	A.M. 1940.11	Wilson & Blunt 1961, 121; Wilson 1964a, 100; Hinton 1974, cat. no. 5; pl. V
598	A2a	Cheddar	Somerset	ARCH	Cu-alloy	90%, broken across rivet holes	58	21	Taunton Museum 05.AA.2/328	Wilson 1979, 282, C.A. 10, fig. 95
599	A2a	Felixstowe	Suffolk	OLD	Cu-alloy	90%, split-end damaged	42	13.4	I.M. 962. 148A	Wilson & Blunt 1961, 121; Wilson 1964a, 103; West 1998; 45.9
600	A2a	Icklingham	Suffolk	OLD	Cu-alloy	100%, repaired in antiquity	41.2	15.3	B.M. 1926; 11-16, 1	Wilson & Blunt 1961, 121; Wilson 1964a; cat. no. 23, pl. XIX; West 1998; 56.7
601	A2a	Ipswich	Suffolk	ARCH	Cu-alloy	95%	42.7	14.4	S.C.C.A.S. sf IAS 4601.0089	Thomas forthcoming
602	A2a	Ewell, nr	Surrey	MD	Cu-alloy	75% split-end missing	35.6	13.4	PP	Info. c/o Bourne Hall Museum
603	A2a	Ryther	Yorks, N	MD	Cu-alloy, Ag/niello inlay	85%, damaged split-end	38	11.2	PP	S.M. record card
604	A2a	Ryther	Yorks, N	MD	Cu-alloy, Ag/niello inlay	80%, damaged split-end	38	11.2	PP	S.M. record card
605	A2a	Whitby	Yorks, N	ARCH	Cu-alloy	80%, split-end missing	38.2	12	B.M. Strictland loan W.62	Peers & Radford 1943, 58, fig. II, 13, pl. XXVIII, c, 45; Wilson & Blunt, 121; Wilson 1964a, cat. no. 124, pl. XL
606	A2a	Whitby	Yorks, N	ARCH	Cu-alloy	80%, split-end missing	33.2	13	B.M. Strictland loan W.63	Peers & Radford 1943, 58, fig. II, II; Wilson & Blunt, 121; Wilson 1964a, cat. no. 125, pl. XL

607	A2a	Whitby	Yorks, N	ARCH	Cu-alloy	85%, split-end missing	40	12	B.M. Strictland loan W.64	Peers & Radford 1943, 58, fig. II, 8; Wilson & Blunt, 121; Wilson 1964a, cat. no. 126, pl. XL
608	A2a	York, 5 Rougier street	Yorks, N	ARCH	Ag, niello inlay	95%	59.2	25.8	Y.M. 1981.12; SF 94	Moulden et. al. 1999, no. 85, fig. 82a
609	A2b	Wakering, Great	Essex	OLD	Cu-alloy	98%	58	18.2	B.M. 92, 11-14, 15	Smith 1923, 106, fig. 131, no. 1; Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 21, pl. XIX
610	A2b	Cottam	Humb, N	MD	Cu-alloy, Ag inlay	85%, terminal and split-end damaged	35.2	16.2	PP	Haldenby 1990, 56, no. 8, fig. 4
611	A2b	Bardney	Lincs	MD	Cu-alloy, niello inlay	80%, split-end missing	28.2	11.2	PP	S.M. record card
612	A2b	Unprov.	London	OLD	Cu-alloy	60%, split-end missing	39	17	M.O.L. A27795	Wheeler 1927. 43-4, fig. 22
613	A2b	Reay Links	Highland, Scotland	OLD	Cu-alloy	95%, broken in two below rondel	48.5	11.1	N.M.S., E. IL 673	Callander 1932-3, 32, fig. 7; ^; £, 111; Proudfoot & Aliaga-Kelly 1996, 6
614 *2	A2b	Rogart	Highland, Scotland	H	Cu-alloy	95%	53.2	16	A.M. 1927.124 & 125	Wilson & Blunt 1961, 121; Wilson 1964a, 28, 113; Hinton 1974, cat. nos 33 & 34, pl. XVIII
615	A2b	Westness	Rousay, Orkney, Scotland	ARCH	Cu-alloy	80%, worn, front-plate of split-end missing	49.3	14.5	N.M.S., E. IL 731 a	Graham-Campbell & Batey 1999, 136, fig. 7.11
616	A2b	Westness	Rousay, Orkney, Scotland	ARCH	Cu-alloy	85%, very corroded	51.7	13.5	N.M.S., E. IL 731 d	Graham-Campbell & Batey 1999, 136, fig. 7.11
617	A2c	Wraysbury	Berks	ARCH	Cu-alloy, enamel inlay	95%, inlay missing	41.3	12.3	Windsor & Wraysbury Arch. Soc.	Berks SMR no. 00036.00.011
618	A2c	Westcroft, nr Milton Keynes	Bucks	MD	Cu-alloy, Ag inlay?	45%, median fragment	18.5	12.5	A.Y.B.C.M. 1993.155.2	
619	A2c	Youlgreave	Derbs	OLD	Cu-alloy	50%, terminal fragment	25	9.6	B.M. 73; 6-2; 68	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 139, pl. XLII
620	A2c	Winterborne Whitechurch	Dorset	MD	Cu-alloy, silvered or tinned	100%	41.8	13	PP	Keen 1986, 195, no. 1, fig. 2

621	A2c	Caistor	Lincs	MD	Cu-alloy, enamel inlay?	95%	36.1	11	PP	S.M. record card
622	A2c	Lincs, North East	Lincs	MD	Cu-alloy	75%, terminal missing	10	31.4	PP	S.M. record card
623	A2c	Sturton by Stow	Lincs	MD	Cu-alloy, Ag	70%, split-end and terminal missing	26.9	11.8	PP	S.M. record card
624	A2c	Ryther	Yorks, N	MD	Cu-alloy	80%, front-plate missing	32.7	9.2	PP	S.M. record card
625	A2d	Norton Malreward nr Bristol	Avon	MD	Ag	100%	34.5	12.6	PP	B.M. record card
626	A2d	Hauxton Mill	Cambs	OLD	Cu-alloy	95%, very worn	30.8	9.1	?	Lethbridge 1938; 327, no. 51, pl. XIi
627	A2d	Winterborne Whitechurch	Dorset	MD	Cu-alloy	90%	35.6	12	PP	Keen 1986, 195, no. 5, fig. 2
628	A2d	Unprov.	East Anglia	MD	Cu-alloy	95%	37.2	9.8	PP	Info. c/o David Haldenby
629	A2d	Unprov.	Essex	MD	Cu-alloy, enamel inlay	85%, split-end damaged	46.4	12.9	PP	Info. c/o Peter Penfold
630	A2d	Cottam	Humb, N	MD	Cu-alloy	95%	33.1	13.5	PP	Haldenby 1992, 27, no. 6, fig. 3
631	A2d	Buslingthorpe	Lincs	MD	Cu-alloy	90%, split-end damaged	47.3	9.9	PP	S.M. record card
632	A2d	Kyme, North	Lincs	MD	Cu-alloy	30%	31.5	12	PP	S.M. record card
633	A2d	Welton-le-Marsh	Lincs	MD	Cu-alloy	90%, split-end damaged	48	14.3	PP	S.M. record card
634	A2d	Gooderstone	Norfolk	MD	Cu-alloy	95%	61.9	19.1	N.C.M. 477.973	Norfolk SMR no. 4580
635	A2d	Harling	Norfolk	ARCH	Cu-alloy	45%, split-end fragment	14.4	9	N.C.M.	Margeson 1995, 60, no. 76, fig. 41
636	A2d	Kelling	Norfolk	MD	Cu-alloy	80%, split-end missing	37.2	10.1	PP	Norfolk SMR
637	A2d	Rudham, West	Norfolk	MD	Cu-alloy	75%, split-end missing	36.6	15.3	PP	Norfolk SMR no. 28130

638	A2d	Ipswich	Suffolk	ARCH	Cu-alloy, enamel inlay?	95%	46.4	11	S.C.C.A.S. sf IAS 3104.510	Thomas forthcoming
639	A2d	Whitby	Yorks, N	ARCH	Cu-alloy	60%, median fragment	30	11.3	B.M. Strickland loan W. 61	Peers & Radford 1943, 58, fig. II, 3; Wilson & Blunt, 121; Wilson 1964a, cat. no. 123, pl. XL
640	A2e	Glenluce Sands	Dumfries & Galloway, Scotland	OLD	Cu-alloy	75%, split-end missing	35.6	13.7	N.M.S., E.	Callander 1932-3, 32, fig. 5, no. 4; Wilson & Blunt 1961, 121; Wilson 1964a, 111; Proudfoot & Aliaga-Kelly 1996, 6
641	A2e	Winchester, nr	Hants	MD	Cu-alloy	90%, broken across rivet holes	42	11	PP	
642	A2e	Royston	Herts	MD	Cu-alloy	100%	30	11.3	PP	B.M. record
643	A2e	Cottam	Humb, N	MD	Cu-alloy	65%, split-end missing	32.3	13.5	PP	Haldenby 1992, 27, no. 7, fig. 3
644	A2e	Driffield	Humb, N	MD	Cu-alloy	95%	49	17	PP	Info. c/o David Haldenby
645	A2e	Newbald, South	Humb, N	MD	Cu-alloy	50%, median fragment	19.5	14.9	PP	Info. c o Kevin Leahy, S.M.
646	A2e	Thwing	Humb, N	ARCH	Cu-alloy, silvered or tinned	95%	41.9	9.5	?	Info. c/o Terry Manby
647	A2e	Thwing	Humb, N	ARCH	Cu-alloy	95%	41.7	7.2	?	Info. c/o Terry Manby
648	A2e	Barnetby	Humb, S	MD	Cu-alloy	75%, split-end missing	31.1	13.3	S.M. not accessioned	
649	A2e	Flixborough	Humb, S	ARCH	Cu-alloy	95%	47.1	16.3	H.F.A. sf 11933	Thomas forthcoming
650	A2e	Harling	Norfolk	ARCH	Cu-alloy	95%	43	13.2	N.C.M. 43.989/6	Margeson 1995, 60, no. 72, fig. 61
651	A2e	Thompson	Norfolk	MD	Cu-alloy	85%, split-end damaged, worn	42	10.5	PP	Norfolk smr no. 31365
652	A2e	Whissonsett	Norfolk	MD	Cu-alloy	95%	37	9.5	PP	Norfolk smr no. 31648
653	A2e	Brandon	Suffolk	ARCH	Cu-alloy	40%; median fragment	28.1	16.4	S.C.C.A.S. sf BRD 018.2532	

654	A2e	Unprov.	Unprov.	MD	Cu-alloy	85%, front-plate of split-end missing	44.8	12	PP	Info. c/o David Haldenby
655	A2f	Maiden Bower	Beds	MD	Cu-alloy, enamel inlay	95%	29.5	10.2	PP	Info. c/o Michael Farley
656	A2f	Royston	Herts	MD	Cu-alloy	30%, lower fragment	21	10.9	PP	B.M. record
657	A2f	Royston	Herts	MD	Cu-alloy	100%	40	9.8	PP	B.M. record
658	A2f	Melton Ross	Humb, S	MD	Cu-alloy	45%, median fragment	26.4	13.7	PP	S.M. record card
659	A2f	Caistor St Edmund	Norfolk	MD	Cu-alloy	90%, split-end damaged	38.3	10.8	PP	Norfolk SMR no. 9813; recorded at Bonhams, London
660	A2g	Shenley Brook End	Bucks	MD	Cu-alloy, enamel inlay	95%	38.5	15.3	PP	Bucks SMR no. 3584
661	A2g	Digby	Lincs	MD	Cu-alloy	100%	42.4	13.1	PP	S.M. record card
662	A2g	Bawsey	Norfolk	MD	Cu-alloy	90%, split-end damaged	38	15	K.L.M. 1985.119.10	Norfolk SMR no. 21078.10 14
663	A2h	Maiden Bower	Beds	MD	Cu-alloy	75%, split-end missing	38.2	11	PP	Info. c/o Michael Farley
664	A2h	St Neots	Cambs	ARCH	Cu-alloy, enamel inlay ?	100%	57.9	12.4	?	Addyman 1973, 95, fig. 118, no. 8
665	A2h	Unprov.	Cambs	MD	Cu-alloy	95%	46.4	9	PP	Info c o David Haldenby
666	A2h	Hod Hill, Hanford	Dorset	MD	Cu-alloy	90%, split-end missing	48.5	9.7	PP	Keen 1986, 195, no. 2, fig. 2
667	A2h	Bradwell	Essex	OLD/ ARCH	Cu-alloy	95%	48.2	10.5	C. & E.M.	Report on C. & E.M. 1947 8, 27, pl. IX, 5; Wilson & Blunt 1961, 121; Wilson 1964a, 100
668	A2h	Saffron Walden	Essex	OLD	Cu-alloy	95%	41.6	9.1	Lost	Evison 1969, fig. 31.
669	A2h	Unprov.	Essex	MD	Cu-alloy	95%	46	11	PP	Info. c/o Peter Penfold
670	A2h	Hotham	Humb, N	MD	Cu-alloy, Ag inlay	90%, split-end damaged	41.6	10.6	PP	S.M. record card

671	A2h	Market Weighton	Humb, N	MD	Cu-alloy, inlay	75%, split-end missing	33.2	10.7	Hull Museum 136.1980.2	
672	A2h	Newbald, South	Humb, N	MD	Cu-alloy	85%, split-end damaged	42	9	PP	Info. c/o Kevin Leahy, S.M.
673	A2h	Sancton	Humb, N	MD	Cu-alloy, enamel inlay	90%, split-end damaged	41	8.8	PP	S.M. record card
674	A2h	Barnetby	Humb, S	MD	Cu-alloy	90%, split-end damaged	47.4	11	S.M. not accessioned	
675	A2h	Ferriby, South	Humb, S	MD	Cu-alloy	85%, split-end damaged	39	8	PP	S.M. record card
676	A2h	Flixborough	Humb, S	ARCH	Cu-alloy, Fe rivets	85%, split-end damaged	36.9	7.9	H.F.A. sf 9768	Thomas forthcoming
677	A2h	Flixborough	Humb, S	ARCH	Cu-alloy, enamel inlay, Fe rivets	100%	33.4	9.5	H.F.A. sf 3774	Thomas forthcoming
678	A2h	Melton Ross	Humb, S	MD	Cu-alloy	30%, lower fragment	20	8.5	PP	S.M. record card
679	A2h	Melton Ross	Humb, S	MD	Cu-alloy	75%, split-end missing	36.9	9.6	PP	S.M. record card
680	A2h	Messingham	Humb, S	MD	Cu-alloy, gilt.	75%, split-end missing	37	7.3	PP	S.M. record card
681	A2h	Enderby	Leics	MD	Cu-alloy	95%	44.9	7.6	PP	B.M. record
682	A2h	West Langton	Leics	MD	Cu-alloy	95%	43.7	11.6	PP	B.M. record
683	A2h	Caistor	Lincs	MD	Cu-alloy, inlay?	90%, worn split-end damaged	36.1	7.9	PP	S.M. record card
684	A2h	Caistor	Lincs	MD	Cu-alloy	95%	57.4	11.5	PP	S.M. record card
685	A2h	Holton-Le-Clay, St Peter's church	Lincs	ARCH	Cu-alloy	100%	37	7.8	?	Sills 1982, 40, SF 4, fig. 11D
686	A2h	Ketsby	Lincs	MD	Cu-alloy, inlay	75%, terminal missing	26.7	8 6	S M. not accessioned	
687	A2h	Ketsby	Lincs	MD	Cu-alloy, Ag inlay	75%, terminal missing	26.98	8.8	PP	S.M. record card

688	A2h	Laughton	Lincs	MD	Cu-alloy	75%, terminal missing	26.3	10.4	PP	S.M. record card
689	A2h	Lincs, North	Lincs	MD	cu-alloy	90%, split-end damaged	52.2	8.8	S.M. 1995.112.001	
690	A2h	Louth	Lincs	MD	Cu-alloy	95%, split-end damaged in antiquity.	36.5	8.3	S.M. not accessioned	
691	A2h	Riby	Lincs	MD	Cu-alloy, enamel inlay	95%	46.7	7.8	PP	S.M. record card
692	A2h	Sturton by Stow	Lincs	MD	Cu-alloy	90%, split-end damaged	39.6	8.3	PP	S.M. record card
693	A2h	Welton-le-Marsh	Lincs	MD	Cu-alloy	95%	47.6	8.8	PP	S.M. record card
694	A2h	Welton-le-Marsh	Lincs	MD	Cu-alloy	75%, split-end missing	38.3	9.2	PP	S.M. record card
695	A2h	Welton-le-Marsh	Lincs	MD	Cu-alloy	50%, split-end missing	26	9.2	PP	S.M. record card
696	A2h	Welton-le-Marsh	Lincs	MD	Cu-alloy, enamel inlay	90%, damaged split-end	58.1	19.1	PP	S.M. record card
697	A2h	Norton Subcourse	Norfolk	MD	Cu-alloy, glass eye inlays	85%, front-plate of split-end missing	54	13.8	PP	Norfolk SMR no. 15015
698	A2h	Quidenham	Norfolk	MD	Cu-alloy	85%, half of front-plate missiing	41.6	8.2	PP	Norfolk SMR no. 30374
699	A2h	Shropham	Norfolk	MD	Cu-alloy	95%	46.2	10.5	PP	Info. c o Clive Warren
700	A2h	Thetford	Norfolk	MD	Cu-alloy	90%, split-end damaged	44.7	12.3	PP	Info. c/o David Haldenby
701	A2h	Yarnton	Oxon	ARCH	Cu-alloy	90% front plate of split-end missing	39.7	9.6	O.A.U.	Thomas forthcoming
702	A2h	Brandon	Suffolk	ARCH	Cu-alloy	75%, terminal missing	28.1	9.2	S.C.C.A.S. sf BRD 018.2125	
703	A2h	Ipswich	Suffolk	ARCH	Cu-alloy	95%, Diagonal breakage across front-plate of split-end	41.5	9.1	S.C.C.A.S. sf IAS 5203.436	West 1998; 96.18; Thomas forthcoming

704	A2h	Ewell, nr	Surrey	MD	Cu-alloy	85% split-end missing	46.5	8.7	PP	Info. c/o Bourne Hall Museum
705	A2h	Bidford	Warks	MD	Cu-alloy	100%	50	10	Warks County Museum; A8041	Seaby & Wise 1995, 60, fig. 2.3
706	A2h	Alton Barnes	Wilts	MD	Cu-alloy	90%; split-end damaged	37	9	PP	D.M. Day Book 1844
707	A2h	Ramsbury	Wilts	ARCH	Cu-alloy	95%	46.3	10.5	D.M. 1988.22.2	Evison 1980, 34, no. 2, fig. 20, pl. I, b
708	A2h	West Overton	Wilts	MD	Cu-alloy	95%	45	7	PP	D.M. Day Book 1941.4
709	A2h	Wootton Bassett	Wilts	MD	Cu-alloy	95%	47	12	PP	D.M. Day Book 1660.2
710	A2h	Ryther	Yorks, N	MD	Cu-alloy	75%, terminal missing	24.3	9.9	PP	S.M. record card
711	A2h	Ryther	Yorks, N	MD	Cu-alloy	75% split-end missing	31.9	9.6	PP	S.M. record card
712	A2h	Ryther	Yorks, N	MD	Cu-alloy	95%	34.4	7.8	PP	S.M. record card
713	A2h	York, Fishergate	Yorks, N	ARCH	Cu alloy, enamel inlay	95%	47	8.8	Y.A.T. 1985.9, context 1056; SF 71	Rogers 1993, 1474, no. 5321, fig. 652
714	A2h	York, Fishergate	Yorks, N	ARCH	Cu-alloy	95%	43.4	10.3	Y.A.T. 1986.9; context 4870 IV; SF 5649	Rogers 1993, 1474, no. 5317, fig. 652
715	A2i	Meols	Cheshire	OLD	Cu-alloy	75%, terminal missing	31	13.3	G.M. (Potter Collection)	Bu'lock 1960, 6, fig. 2f; Wilson & Blunt 1961, 121; Wilson 1964a, 109; Griffiths 1991, 287, no. 104, M ST 4, pl. 10
716	A2i	Unprovenaced	East Anglia	MD	Cu-alloy	85%, damaged split-end	44.2	16.5	PP	Info. c/o David Haldenby
717	A2i	Canterbury, Longmarket	Kent	ARCH	Cu-alloy	45%; median fragment	17.5	11.5	C.M. 1990.3587	
718	A2i	Boston	Lincs	MD	Cu-alloy	90%, damaged split-end	48	11.5	PP	A.R.C artefact sheet
719	A2i	Willoughby	Lincs	MD	Cu-alloy	95%	49.5	13.4	PP	S.M. record card
720	A2i	Elmsham, North	Norfolk	MD	Cu-alloy	100%	34	10.4	PP	Info. c/o David Haldenby

721	A2i	Walpole-St-Peter	Norfolk	MD	Cu-alloy	95%	32	11	PP	Norfolk SMR no. 21341. 3; Gurney 1990, 103, fig. 8, no. 4
722	A2i	Wetheringsett cum Brockford	Suffolk	MD	Cu-alloy	85%, damaged split-end	30.5	14.2	PP	Suffolk SMR no. WCB 016
723	A2i	Shalbourne	Wilts	MD	Cu-alloy	90%, front-plate broken-away	37	12	PP	D.M. Daybook 1494. 8
724	A2i	Upavon	Wilts	MD	Cu-alloy, enamel inlay	90%, damaged split-end	32	11.5	D.M. Collections; 1986.96	
725	A2i	Pot Ridings	Yorks, S	MD	Cu-alloy	95%, back-plate bent	46.3	13.1	Doncaster Museum 1983.263	
726	A2i	Elmshall, North	Yorks, W	MD	Cu-alloy	100%	34	10.4	PP	Info. c/o David Haldenby
727	A3	Cranborne	Dorset	MD	?	95%	61	15.2	PP	Info. c/o Leslie Webster
728	A3	Cheriton	Hants	MD	Cu-alloy, Ag, niello inlay	95%	37	16	PP	B.M. record
729	A3	Hainford	Norfolk	MD	Cu-alloy	90%, split-end damaged	32.7	14.3	N.C.M. 201.987 (2)	
730	A3	Brandon	Suffolk	ARCH	Cu-alloy, niello inlay	95%	56.9	16.8	S.C.C.A.S. sf BRD 018.2342	Webster in Webster & Backhouse 1991, cat. no. 661
731	A3	Selsey, Church Norton	Sussex, W	OLD/ ARCH	Cu-alloy	95%	51.7	15	Lost	Salzman 1912, 60, pl. V; Wilson & Blunt 1961, 121; Wilson 1964a, 112; Hinton 1981
732	A3	York, Tanner Row	Yorks, N	OLD	Cu-alloy, Ag, Cu & brass inlays	80%, split-end missing	40.8	17.7	Y.M. 1961.6.1	Wilson 1964b, 215, pl. XIXA; Moulden et. al. 1999, no. 175, fig. 107
733	A4	Rushall	Wilts	MD	Cu-allloy	85%, split-end missing	44	14.5	D.M. Collections; 1985 62	
734	A4/5a	Weston Underwood	Bucks	MD	Cu-alloy	90%, setting missing	61	15	?	Smith 1996
735	A4/5a	Royston	Herts	MD	Cu alloy	95%, inlay missing	50.9	21.1	PP	B.M. record
736	A4/5a	Cottam	Humb, N	MD	Cu-alloy	70%, split-end damaged, inlay missing	37.8	11.1	PP	Haldenby 1990, 58, no. 12, fig. 4

737	A4/5a	Carisbrooke	Isle of Wight	MD	Cu-alloy, enamel inlay?	85%, front-plate of split-end missing	62	16	PP	Isle of Wight Museum, temp ref no. ID69
738	A4/5a	Bawsey	Norfolk	MD	Cu-alloy	95%, inlay lost	37.3	10	?	Norfolk SMR no. (21078 31) 4
739	A4/5a	Burgh Castle	Norfolk	MD	Cu-alloy	75%, split-end damaged, front-plate missing	23.8	7.5	PP	Norfolk SMR no. 22929
740	A4/5a	Bealings, Little	Suffolk	MD	Cu-alloy	90%, very worn	40.6	11.4	PP	Suffolk SMR no. BEL 015; West 1998; 9.4
741	A4/5a	Brandon	Suffolk	MD	Cu-alloy	75%, split-end missing, terminal damagedl	49	16.6	PP	Suffolk SMR no. BRD 075
742	A4/5a	Combs	Suffolk	MD	Cu-alloy	45%, split-end missing	33.1	8.6	PP	Suffolk SMR no. COM 014
743	A4/5b	Ellesborough	Bucks	MD	Cu-alloy, white metal or enamel inlay inlay	25%, terminal fragment	30	13.5	A.Y.B.C.M. 1995.42.1	
744	A4/5b	Asby	Cumbria	MD	Cu-alloy	95%, inlays lost	44.1	12.4	PP	B.M. record
745	A4/5b	Aberlady	East Lothian, Scotland	MD	Cu-alloy	75%, split-end missing	34.5	13.2	N.M.S., E. IG 8	
746	A4/5b	Unprov.	Essex	MD	Cu-alloy	85%, damaged split-end, inlays missing	38	9	PP	Info. c/o Peter Penfold
747	A4/5b	Unprov.	Essex	MD	Cu-alloy, enamel inlay	65%, split-end missing	36.2	14.8	PP	Info. c/o Peter Penfold
748	A4/5b	Hamwic	Hants	ARCH	Cu-alloy	75%, inlays and terminal missing	34	11.2	S.C.H.	Hinton 1996a, 41, 24/834, fig. 16
749	A4/5b	Flixborough	Humb. S	ARCH	Cu-alloy, inlay	45%, terminal and front-plate of split-end missing	24.5	11.1	H.F.A. sf 7326	Thomas forthcoming
750	A4/5b	Baumber	Lincs	MD	Cu-alloy, enamel inlay	75%, split-end missing	35	11.8	PP	B.M. record
751	A4/5b	Wigtoft	Lincs	MD	Cu-alloy, enamel inlay	60%, split-end missing	37.5	15	PP	S.M. record card

752	A4/5b	Wigtoft	Lincs	MD	Cu-alloy, enamel inlay	50%, split-end missing	0	0	PP	S.M. record card
753	A4/5b	Bawsey	Norfolk	MD	Cu-alloy, inlay	80%, damaged split-end	34.2	11.5	N.C.M.	Norfolk SMR no. 21078/120 21
754	A4/5b	Congham	Norfolk	MD	Cu-alloy, inlay	50%, lower fragment	23.9	8.5	PP	Norfolk SMR no. 25765
755	A4/5b	Hindringham	Norfolk	MD	Cu-alloy, inlay	70% split-end damaged	49.9	14.8	PP	Norfolk SMR no. 25071
756	A4/5b	Stow Bedon	Norfolk	MD	Cu-alloy	65%, split-end missing	10.6	10.5	PP	Info. c/o Clive Warren
757	A4/5b	Wattisfield	Suffolk	MD	Cu-alloy, enamel inlay	85%, front-plate of split-end missing	32.3	14.3	PP	Suffolk SMR no. WSF 050
758	A4/5b	Wherstead	Suffolk	MD	Cu-alloy	80%, split-end and inlays missing	36.5	12.2	?	Suffolk SMR no. WHR 037
759	A4/5b	Unprov.	Yorks, N	MD	Cu-alloy	100%, inlays missing	49	13.4	PP	S.M. record card
760	A4/5b	Pot Ridings	Yorks, S	MD	Cu-alloy	90%, back-plate and upper section of split-end missing	41.8	12.4	Doncaster Museum 1982.262	
761	A4a	Horncastle	Lincs	ARCH	Cu-alloy, enamel inlay	90%, split-end damaged	49	12	?	Field & Hurst 1983, 73, no. 13, fig. 23.5
762	A4a	Surlingham	Norfolk	MD	Cu-alloy, enamel inlay	75%, split-end missing	29.7	8.9	PP	Norfolk SMR no. 31456
763	A4b	Unprov.	East Anglia	MD	Cu-alloy, enamel inlay	95%	49.2	9	PP	B.M. record
764	A4b	Nettleham	Lincs	MD	Cu-alloy, enamel inlay	95%	45.9	13.3	PP	S.M. record card
765	A4b	Bishopstone, Lewes, Norton Farm	Sussex, E	MD	Cu-alloy, enamel inlay	90%, breakage on front plate of split-end.	42.5	14.5	B.H.M.	
766	A4b	Ryther	Yorks, N	MD	Cu-alloy, enamel inlay	95%	59	18	PP	S.M. record card
767	A4c	Corby Glen	Lincs	MD	Cu-alloy, enamel inlay	75%, split-end missing	49.3	14	PP	Info. c/o David Haldenby

768	A4c	Ruskington	Lincs	MD	Cu-alloy, enamel inlay	95%	56	11.9	S.M.	S.M. record card
769	A4c	Unprov.	London	MD	Cu-alloy, enamel inlay	75%, broken at split-end	58	0	PP	M.O.L. MD finds reg. 19 2/91
770	A4c	Congham	Norfolk	MD	Cu-alloy, enamel inlay	95%	36.5	13	PP	Norfolk SMR no. 25765
771	A4c	Unprov.	Suffolk	MD	Cu-alloy, enamel inlay	95%	59	15	M.H.M.	Norfolk SMR no. 19544
772	A4d	Over Compton	Dorset	MD	Cu-alloy, enamel inlay	95%		0	PP	Info. c/o Robert Keen, D.C.C.A.S.
773	A4d	Poundbury, Dorchester	Dorset	ARCH	Cu-alloy, enamel inlay.	95%	53.5	15.2	D.C.M.	Keen 1986, 196, no. 7, fig. 2; Cool 1987, 98, no. 13, fig. 68
774	A4d	Cottam	Humb, N	MD	Cu-alloy, enamel inlay	95%	47.9	12	PP	Haldenby 1990, 58, no. 13, fig. 4
775	A4d	Hayton	Humb, N	MD	Cu-alloy, enamel inlay inlay	95%, worn	46	15.5	PP	Info. c/o David Haldenby
776	A4d	Canterbury, St Gregory's Priory	Kent	ARCH	Cu-alloy, enamel inlay	85%, split-end damaged	48	15	C.M. 1990.1729	Info. c/o Ian Riddler, C.A.T.
777	A4d	Melton Ross	Lincs	MD	Cu-alloy, enamel inlay	75%, split-end missing	34.6	12.5	PP	S.M. record card
778	A4d	Bawsey	Norfolk	MD	Cu-alloy, enamel inlay	95%	38	18	N.C.M.	Norfolk SMR no. 12364/4 13
779	A4d	Shropham	Norfolk	MD	Cu-alloy, enamel inlay	95%	36.9	15.3	PP	Info. c/o Clive Warren
780	A5	Barwick	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	45%, median fragment	15.9	11.7	PP	Norfolk SMR no. 28705; Thomas 1996, 91, cat. no. 2
781	A5	Rougham	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	50%, lower fragment	?	?	PP	Norfolk SMR no. 25921
782	A5	Walton, West	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	100%, lateral breakage midway	41.2	15.5	PP	Norfolk SMR no. 171; Thomas 1996, 96, cat. no. 41

783	A5	Freckenham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	25%, terminal fragment only	31.6	14.3	PP	Suffolk SMR no. FRK 009
784	A5	Nacton	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	45%, terminal fragment	31.1	13.7	PP	Suffolk SMR no. NAC 037; Thomas 1996, 98, cat. no. 58
785	A5	Thelnetham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	15%, terminal fragment	23	9.8	PP	Suffolk SMR no. THE 016; Thomas 1996, 98, cat. no. 62
786	A5	Wixoe	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	95%	?	?	PP	Suffolk SMR no. WIX 003
787	A5 5b	Badley, nr Stourmarket	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	25%, worn terminal fragment	30.6	14.8	PP	Suffolk SMR
788	A5a	Unprov.	East Anglia	MD	Cu-alloy, niello & Ag wire inlay	75%, split-end missing	32.2	9.7	PP	Recorded at Bonhams, London
789	A5a	Hamwic	Hants	ARCH	Cu-alloy, enamel inlay & Ag wire inlay	95%	39	8.7	S.C.H.	Hinton 1996a, 41, 15 4, fig. 16; Thomas 1996, 96, cat. no. 37
790	A5a	Ramsgate	Kent	MD	Cu-alloy, niello & Ag wire inlay	50%, lower fragment	29.9	10.5	PP	Info. c/o David Haldenby
791	A5a	Bawsey	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	45%, lower fragment	24	9.8	N.C.M.	Norfolk SMR no. 21078 41.10
792	A5a	Bawsey	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	46.3	12.5	PP	Norfolk SMR no. 25962; Thomas 1996, 95, cat. no. 27
793	A5a	Brampton	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	98%	33.6	9.2	N.C.M. case no.10 on loan.	Norfolk SMR no. 1124; Thomas 1996, 95, cat. no. 28
794	A5a	Heacham	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	100%	48.8	11.1	PP	Info. c/o Mr J. Bocking

795	A5a	Methwold	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	55.8	14	PP	Norfolk SMR no. 48; Thomas 1996, 96, cat. no. 33;
796	A5a	Quidenham	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	61.5	9.5	PP	Norfolk SMR no. 30351; Thomas 1996, 96, cat. no. 35
797	A5a	Thetford	Norfolk	ARCH	Cu-alloy, niello & Ag wire inlay	60%, split-end missing	31.3	9.8	?	Goodall 1993, 96, no. 23, fig. 17; Thomas 1996, 96, cat. no. 39
798	A5a	Tuddenham, East	Norfolk	MD	Cu-alloy, Ag, niello inlay	95%, inlay damaged	37.4	9.1	PP	Norfolk SMR no. 25767; Thomas 1996, 95, cat. no. 31
799	A5a	Walsoken	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	45%, damaged split-end, terminal missing	20.7	13	PP	Norfolk SMR no. 19047; Thomas 1996, 96, cat. no. 40
800	A5a	Barham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	75%, terminal and back-plate of split-end missing	28.8	10	PP	Suffolk SMR no. BRH 018; Thomas 1996, 97, cat. no. 54; West 1998, 5.32
801	A5a	Barham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	85%, worn, damaged split-end	33.7	10.7	PP	Suffolk SMR no. BRH 019
802	A5a	Bealings, Little	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	85%, worn, damaged split-end	43.2	10.2	PP	Suffolk SMR no. BEL 016; Thomas 1996, 96, cat. no. 32
803	A5a	Brandon	Suffolk	ARCH	Cu-alloy, niello & Ag wire inlay	90%, damaged split-end	47.3	12.2	S.C.C.A.S. sf BRD 018.9850	Thomas 1996, 95, cat. no. 29, fig. 6
804	A5a	Coddenham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	100%, corroded inlay	36	11	I.M. not accessioned	Thomas 1996, 95, cat. no. 30
805	A5a	Coddenham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	30%, terminal fragment	25.1	10	PP	Suffolk SMR no. CDD 021; West 1998; 19.8
806	A5a	Ixworth	Suffolk	OLD	Cu-alloy, niello & Ag wire inlay	100%, inlay missing on main panel	48	8	A.M. 1909.442	Wilson & Blunt 1961, 121; Wilson 1964a, 106; Hinton 74, cat. no.16, pl. VIII; West 1998, 102.9

807	A5a	Nacton	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	100%, broken in two above terminal	58.6	15.5	I.M. 1987.150.2A	Suffolk SMR no. NAC 033, Thomas 1996, 96, cat. no. 34; West 1998, 117.9
808	A5a	Sutton	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	95%	38	10	PP	Suffolk SMR no. SUT 028; Thomas 1996, 96, cat. no. 38; West 1998, 128.4
809	A5a	Wherstead	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	95%, broken in two above terminal	45.6	12.5	PP	Suffolk SMR no. WHR 037; Thomas 1996, 98, cat. no. 63
810	A5a	Unprov.	Unprov.	MD	Cu-alloy, niello & Ag wire inlay	100%, corroded	42.4	7.7	PP	Recorded at Bonhams, London
811	A5a	Ryther	Yorks, N	MD	Cu-alloy, niello & Ag wire inlay	50%, split-end missing	38.1	12.5	PP	S.M. record card
812	A5b	Cambridge	Cambs	OLD	Cu-alloy, niello & Au-wire inlay	75%, split-end missing	36	11.5	C.U.M.A.A.	Lethbridge 1938; 327, no. 53, pl. Xig; Thomas 1996, 92, cat. no. 9
813	A5b	Repton	Derbs	ARCH	Cu-alloy, niello & Ag wire inlay	100%	45	14	?	Info. c o Nick Wickenden; Thomas 1996, 95, cat. no. 22
814	A5b	Unprov.	East Anglia	MD	Cu-alloy, niello & Ag wire inlay	30%, terminal fragment	24.8	15.3	PP	Recorded at Bonhams, London
815	A5b	Berechurch	Essex	MD	Cu-alloy, niello & Ag wire inlay	95%	58	11.5	PP	B.M. record; Thomas 1996, 91, cat. no. 6
816	A5b	Fingringhoe	Essex	MD	Cu-alloy, niello & Ag wire inlay	85%, split-end damaged	34.6	8.9	PP	Suffolk SMR; Thomas 1996, 92, cat. no. 14
817	A5b	Winchester, nr	Hants	MD	Cu-alloy, niello & Ag wire inlay	85%, split-end damaged	32	9.8	PP	Info. c/o David Haldenby

818	A5b	Cottam	Humb, S	MD	Cu-alloy, niello & Ag wire inlay	50%, median fragment	19.6	11.5	PP	Haldenby 1990, 57-8, no. 11, fig. 4; Thomas 1996, 92, cat. no. 12
819	A5b	Cottam	Humb, S	MD	Cu-alloy, niello/enamel inlay	90%, split-end damaged, worn	57.6	15.7	PP	Haldenby 1992, 30, no. 2, fig. 3; Thomas 1996, 92, cat. no. 12
820	A5b	Cottam	Humb, S	MD	Cu-alloy, enamel inlay	90%, worn, damaged split-end	54.8	14.2	PP	Haldenby 1992, 30, no. 3, fig. 3; Thomas 1996, 92, cat. no. 12
821	A5b	Cottam	Humb, S	MD	Cu-alloy, enamel inlay	35%, median fragment	14.2	11.3	PP	Haldenby 1992, 30, no. 4, fig. 3; Thomas 1996, 92, cat. no. 12
822	A5b	Flixborough	Humb, S	ARCH	Cu-alloy, niello & Ag wire inlay	70%, terminal missing	23.1	11.4	H.F.A. sf 1505	Thomas forthcoming
823	A5b	Thwing	Humb, S	ARCH	Cu-alloy, niello/enamel inlay	90%, inlay missing	52.7	10.6	PP	Info. c o Terry Manby
824	A5b	Bawsey	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	60%, terminal missing	22.8	11.1	?	Norfolk SMR no. 12364/3.8; Thomas 1996, 91, cat. no. 5
825	A5b	Bawsey	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%, inlays missing, broken in two.	54.8	12.5	N.C.M. not accessioned	Norfolk SMR no. 21078/109.20
826	A5b	Bawsey	Norfolk	MD	Cu-alloy, niello/enamel inlay & Ag wire inlay	100%	41.7	12.7	K.L.M not accessioned	Norfolk SMR no. 21078 110.26; Thomas 1996, 91, cat. no. 3
827	A5b	Bawsey	Norfolk	MD	Cu-alloy, enamel & Ag wire inlay, Corinthium bronze repair rivet	50%, terminal missing	21	18	N C.M.	Norfolk SMR no. 3326/1.7; Stapleton et al. 1995, Thomas 1996, 91, cat. no. 4
828	A5b	Costessey	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	30%, terminal fragment	26.3	14	PP	Norfolk SMR no. 9310; Thomas 1996, 92, cat. no. 11

829	A5b	Costessey	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	38.6	10	PP	Norfolk SMR no. 9310/c3; Thomas 1996, 92, cat. no. 10
830	A5b	Creake, North	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%, front-plate of split-end missing	41.1	10.1	PP	Info. c/o Patrick Wormald, University of Oxford
831	A5b	Huntstanton, Old	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	85%, terminal missing	27.9	10.6	PP	Norfolk SMR no. 1270; Thomas 1996, 92, cat. no. 19
832	A5b	Kelling	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	36.3	11.6	PP	Norfolk SMR
833	A5b	Roudham	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	100%, inlays damaged	39.4	14.3	PP	Norfolk SMR no. 30192
834	A5b	Rudham, West	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	75%, terminal missing	27.1	10	PP	Norfolk SMR no. 28130
835	A5b	Stratton Strawless	Norfolk	MD	Cu-alloy, niello/enamel inlay & Ag wire inlay	85%, worn, split-end damaged,	31.9	11.1	PP	Norfolk SMR no. 7640
836	A5b	Walpole St-Peter	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	60%, terminal and inlays missing	31.1	19.5	PP	Norfolk SMR no. 21341.4; Gurney 1990, 103, fig. 8, no. 5; Thomas 1996, 95, cat. no. 24
837	A5b	Walpole-St-Peter	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	50%, terminal and section of panel missing	35.7	13.8	PP	Norfolk SMR no. 21341.5; ; Gurney 1990, 103, fig. 8, no. 6; Thomas 1996, 95, cat. no. 25
838	A5b	Barham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	45%, split-end missing	35	14.3	PP	Suffolk SMR no. BRH 018. 532; Thomas 1996, 91, cat. no. 1; West 1998, 5.33
839	A5b	Bealings, Little	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	75%, split-end missing	33.5	10.3	PP	Suffolk SMR no. BEL 017; Thomas 1996, 92, cat. no. 66; West 1998, 9.5

840	A5b	Brandon	Suffolk	ARCH	Cu alloy, niello & Ag wire inlay	80%, damaged split-end, inlays missing	47.2	15.6	S.C.C.A.S. sf BRD 018. 8674	Thomas 1996, 91, cat. no. 8
841	A5b	Brandon	Suffolk	ARCH	Cu-alloy, niello & Ag wire inlay	100%	42.5	13.4	S.C.C.A.S. sf BRD 018.3638	Webster in Webster & Backhouse 1991, cat. no. 66m; Thomas 1996, 91, cat. no. 7;
842	A5b	Elmsett	Suffolk	MD	Cu-alloy	100%, settings missing	35.1	13.6	I.M.	Suffolk SMR no. ETT 012
843	A5b	Felixstowe	Suffolk	OLD	Cu-alloy, niello inlay, Ag wire	90%, inlay missing, split-end damaged	40.4	10.5	I.M. 671.76.94	Kendrick 1934; Wilson & Blunt 1961, 121; Wilson 1964a, 103; Thomas 1996, 92, cat. no. 13, fig. 5; West 1998; 45.10
844	A5b	Freckenham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	75%, split-end missing	38.9	15.4	PP	Suffolk SMR no. FRK 038; Thomas 1996, 98, cat. no. 51
845	A5b	Ipswich	Suffolk	ARCH	Cu-alloy, niello & Ag wire inlay	85%, split-end damaged	42.2	13.6	S.C.C.A.S. sf IAS 3201.89	Thomas 1996, 92, cat. no. 15; Thomas forthcoming
846	A5b	Nacton	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	85%, split-end damaged	46.3	13	PP	Suffolk SMR no. NAC 033; Thomas 1996, 92, cat. no. 18; West 1998; 117.8
847	A5b	Otley	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	100%, breakage above terminal	43.1	13.6	PP	Suffolk SMR no. OTY 020; Thomas 1996, 92, cat. no. 20
848	A5b	Redgrave	Suffolk	MD	Cu alloy, niello & Ag wire inlay	95%, inlays missing	48.2	11.5	PP	Suffolk SMR no. RDG 029, Thomas 1996, 95, cat. no. 21
849	A5b	Stutton	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	40%, median fragment	24	22.1	PP	Suffolk SMR no. STU 027; Thomas 1996, 98, cat. no. 61; West 1998; 127.8
850	A5b	Waldringfield	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	75%, split-end missing.	47	14.6	PP	Suffolk SMR no. WLD 014; Thomas 1996, 95, cat. no. 23; West 1998; 132.6
851	A5b	Lindrick Common, nr Worksop	Yorks, S	MD	Cu-alloy, niello & Ag wire inlay	75%, split-end damaged	43	12.4	Rotheram Museum, A/3 93	

852	A5c	Unprov.	Essex	MD	Cu-alloy, niello & Ag wire inlay	95%, inlays missing	33	16	PP	Info. c/o Peter Penfold
853	A5c	Huncote	Leics	MD	Cu-alloy, niello & Ag wire inlay	100%	43.8	11.8	PP	Leics SMR
854	A5c	Burgh Castle	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	90%, worn, inlay missing	29.9	14.3	PP	Norfolk SMR no.11606
855	A5c	Caitser, West	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	100%, worn	33.8	13.2	N.C.M. 454.978	Thomas 1996, 97, cat. no. 53, fig. 6
856	A5c	Congham	Norfolk	MD	Cu-alloy, Ag wire, niello inlay	100%	39	10.4	PP	Norfolk SMR no..25765; Thomas 1996, 97, cat. no. 45
857	A5c	Hockham, Little	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	90%, worn, terminal damaged,	28.2	12.4	PP	Norfolk SMR
858	A5c	Kessingland	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	100%, inlays worn	29.8	12.5	PP	Norfolk SMR; Thomas 1996, 97, cat. no. 49
859	A5c	Pulham St Mary	Norfolk	MD	Cu-alloy	90%, very worn, inlays missing	37.9	13.7	PP	Norfolk SMR no. 22622; Thomas 1996, 97, cat. no. 52
860	A5c	Ryburgh, Great	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	60%, split-end missing	27.5	16.5	PP	Norfolk SMR no. Site 7154; Thomas 1996, 97, cat. no. 48
861	A5c	Swainsthorpe	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	100%, worn	33.7	12.6	PP	Norfolk SMR no. 9724
862	A5c	Unprov.	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	37.6	15.6	PP	Norfolk SMR
863	A5c	Boxted	Suffolk	MD	Cu-alloy, niello inlay, Ag wire	98%	35	17.3	PP	Suffolk SMR no. BXT 019; Thomas 1996, 97, cat. no. 43; West 1998; 10.2

864	A5c	Chediston	Suffolk	MD	Cu-alloy	85%, inlays missing, split-end damaged	37	14.5	PP	Suffolk SMR no. CHD 014; Thomas 1996, 97, cat. no. 44
865	A5c	Elmsett	Suffolk	MD	Cu-alloy	90%, split-end damaged, inlays worn	34.1	10.9	I.M. not accessioned	Thomas 1996, 97, cat. no. 47
866	A5c	Elmsett	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	45%, proximal fragment	23	14.2	I.M. not accessioned	Thomas 1996, 97, cat. no. 46
867	A5c	Kessingland	Suffolk	MD	Cu-alloy, inlays missing	90%, worn, inlays missing,	29.6	12.5	PP	Norfolk SMR; Thomas 1996, 97, cat. no. 49
868	A5c	Lakenheath	Suffolk	OLD	Cu-alloy, niello & Ag wire inlay	90%, front-plate of split-end missing.	43.1	12.6	C.U.M.A.A. 47.2610	Suffolk SMR no. LKH Misc; Lethbridge 1938, 327; Wilson & Blunt 1961, 121; Wilson 1964a, 107; Thomas 1996, 97, cat. no. 50, fig. 6; West 1998, 112.5
869	A5c	Packenham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	95%, inlays missing	47	17.4	PP	Suffolk SMR no. PKM 007; Thomas 1996, 97, cat. no. 51
870	A5d	Royston	Herts	MD	Cu-alloy, niello & Ag wire inlay	95%, inlays missing	62.9	20.3	PP	B.M. record; Thomas 1996, 98, cat. no. 60
871	A5d	Melton, Great	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	80%, split-end missing	54.3	15.6	PP	Norfolk SMR no. 20661; Thomas 1996, 98, cat. no. 57
872	A5e	Bixley	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	90%, inlay missing	37.6	9.6	PP	Norfolk SMR no. 9585
873	A5e	Wreningham	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	38	10.8	PP	Norfolk SMR no. 30201
874	B	Wrington	Avon	MD	Cu-alloy	100%	40.7	8.5	PP	Info. c/o David Haldenby
875	B	Upton Nervet	Berks	ARCH	Cu-alloy	95%	34	8.3	?	Manning 1973-4, 55, fi. 31, no. 1

876	B	Unprov.	Cambs	MD	Cu-alloy	95%	47.2	8.8	PP	Info. c/o David Haldenby
877	B	Hod Hill, Hanford	Dorset	MD	Cu-alloy	90%	38.2	7.5	PP	Keen 1986, 195, no. 4, fig. 2
878	B	Stour Valley	Dorset	MD	Cu-alloy	95%	49.3	11.8	PP	Info. c/o Nick Griffiths
879	B	Winterborne Whitechurch	Dorset	MD	Cu-alloy	90%, broken across rivet holes	25	7.5	PP	Keen 1988, fig. 10a
880	B	Winterborne Whitechurch	Dorset	MD	Cu-alloy	100%	41.5	9.4	PP	Keen 1986, 195, no. 4, fig. 2
881	B	Whithorn	Dumfries & Galloway, Scotland	ARCH	Cu-alloy	95%	50 5	14.6	?	Nicholson & Hill 1998, 374, BZ19a.4, fig. 10.58
882	B	Unprov.	East Anglia	MD	Cu-alloy	95%	44 6	10.2	PP	Info. c/o David Haldenby
883	B	Unprov.	East Anglia	MD	Cu-alloy	93%	56.5	10.3	PP	Info. c/o David Haldenby
884	B	Canvey, Leigh Beck	Essex	MD	Cu-alloy	95%, worn	42	9	?	Info. c o E.C.C.A.S.
885	B	Chelmsford	Essex	MD	Cu-alloy	90%, corroded, split-end damaged	39.8	7.9	PP	Info. c o David Haldenby
886	B	Wickford	Essex	ARCH	Cu-alloy	90%, split-end damaged	39.5	9.7	?	Couchran, 1979, 44
887	B	Hamwic	Hants	ARCH	Cu-alloy	60%, shaft broken	28	6.9	S.C.H.	Hinton 1995, 40, 169 1465, fig. 15
888	B	Hamwic	Hants	ARCH	Cu-alloy	100%	44	6.8	S.C.H.	Hinton 1996a, 40, 30 177, fig. 15
889	B	Hamwic	Hants	ARCH	Cu-alloy	95%	29	9.8	S.C.H.	Hinton 1996a, 43, 258 80, fig. 17
890	B	Hamwic	Hants	ARCH	Cu-alloy	85%, split-end damaged	32	9.4	S.C.H.	Hinton 1996a, 43, 32 166, fig. 17
891	B	Hamwic	Hants	ARCH	Cu-alloy	95%	32	8.8	S.C.H.	Hinton 1996a, 43, 169 2037, fig. 17
892	B	Itchen Abbas	Hants	MD	Cu-alloy	90%	35	7.5	PP	B.M. record
893	B	Portchester	Hants	ARCH	Cu-alloy	95%	56	16	?	Hinton & Welch 1976, 216, no. 52, fig. 136

894	B	Winchester	Hants	ARCH	Cu-alloy, tin	100%	36	10.5	H.H.R.C. sf 7283	Hinton 1990b, 501, 1065, fig. 126
895	B	Winchester	Hants	ARCH	Cu-alloy, Fe rivets	100%	42	9.3	H.H.R.C. sf 3601	Hinton 1990b, 502, 1068, fig. 126
896	B	Winchester	Hants	ARCH	Fe	100%	44	11	H.H.R.C. sf 6402	Hinton 1990b, 501, 1062, fig. 126
897	B	Winchester	Hants	ARCH	Cu-alloy	95%	37	9.2	W.C.M. sf 1076	Hinton 1990b, 502, 1070, fig. 126
898	B	Winchester	Hants	ARCH	Cu-alloy	95%	32	10.6	W.C.M. sf 638	Hinton 1990b, 502, 1071, fig. 126
899	B	Winchester	Hants	ARCH	Cu-alloy	95%	37	10	H.H.R.C. sf 586	Hinton 1990b, 502, 1066, fig. 126
900	B	Winchester	Hants	ARCH	Cu-alloy	95%	42	9.7	H.H.R.C. sf 605	Hinton 1990b, 502, 1069, fig. 126
901	B	Winchester, nr	Hants	MD	Cu-alloy	95%	43	9	PP	Info. c/o David Haldenby
902	B	Winchester, nr	Hants	MD	Cu-alloy	100%	39	7	PP	Info. c/o David Haldenby
903	B	Winchester, nr	Hants	MD	Cu-alloy	100%	40	11	PP	Info. c/o David Haldenby
904	B	Royston	Herts	MD	Cu-alloy	95%	40.6	9.7	PP	B.M. record
905	B	Royston	Herts	MD	Cu-alloy	100%	34.1	9	PP	B.M. record
906	B	Royston	Herts	MD	Cu-alloy	95%	39.3	10.5	PP	B.M. record
907	B	Weston	Herts	MD	Cu-alloy	93%, worn, damaged split-end	30.4	6.5	PP	Info. c/o David Haldenby
908	B	Cottam	Humb, N	MD	Cu-alloy	95%	29	10.9	PP	Haldenby 1990, 58, no.18, fig. 4
909	B	Newbald, South	Humb, N	MD	Cu-alloy	75%, split-end missing	30.5	8	PP	Info. c/o Kevin Leahy, S.M.
910	B	Thwing	Humb, N	ARCH	Cu-alloy	95%	38.7	7.2	?	Info. c/o Terry Manby
911	B	Ferriby, South	Humb, S	MD	Cu-alloy	90%, damaged split-end	37.4	8.1	S.M. 1995.047.35	
912	B	Ferriby, South	Humb, S	MD	Cu-alloy	95%	37	7.5	PP	S.M. record card

913	B	Kirmington	Humb, S	MD	Cu-alloy	95%	36.7	6.3	S.M. KMAA 333	
914	B	Stallingborough	Humb, S	MD	Cu-alloy, Ag inlay	100%	63.1	9.5	PP	S.M. record card
915	B	Canterbury, Marlow IV	Kent	ARCH	Cu-alloy	95%	41	13	C.M. 1980.561	Garrard 1995, 1047, no. 504, fig. 446
916	B	Canterbury, Marlowe I	Kent	ARCH	Cu-alloy	90%, split-end damaged	42	9.5	C.M. 1978.101	Garrard 1995, 1045, no. 501, fig. 445
917	B	Canterbury, St George's St.	Kent	ARCH	Fe	100%	49	10.5	C.M. 1985.456	Webster 1988, 125, no. 61, fig. 21
918	B	Canterbury, Church Lane	Kent	ARCH	Cu-alloy, red enamel inlay	95%	40.5	10	C.M. 1983.83	
919	B	Canterbury, Longmarket	Kent	ARCH	Cu-alloy	95%	47	9	C.M. 1990.2229	
920	B	Cobham, Henley Down	Kent	MD	Cu-alloy	95%	29	7.8	M.M. MNEMG 1989.124b	
921	B	Gravesend	Kent	MD	Cu-alloy	100%	45	9	PP	M.M. record
922	B	Horton Kirby	Kent	MD	Cu-alloy	100%, corroded	41.5	8.7	PP	Info. c/o David Haldenby
923	B	Lenham	Kent	MD	Cu-alloy	95%	40	9	PP	Kelly 1987, 355, fig. 7, no. 6
924	B	Margate	Kent	MD	Cu-alloy	95%	42	9	PP	Info. c/o David Haldenby
925	B	Margate	Kent	MD	Cu-alloy	100%	40.7	9.3	PP	Info. c/o David Haldenby
926	B	Monkton	Kent	MD	Cu-alloy	95%	54	10	PP	Info. c/o David Haldenby
927	B	Northfleet Green	Kent	MD	Cu-alloy	90%	48	12	M.M. not catalogued	
928	B	Northfleet Green	Kent	MD	Cu-alloy	95%	46	9	M.M. not catalogued	
929	B	Goadby Marwood	Leics	MD	Cu-alloy	90%, front-plate of split-end missing.	42.5	6.9	PP	Leics SMR record
930	B	Scraptoft	Leics	MD	Cu-alloy	95%	44.2	8.9	PP	Leics SMR record
931	B	Brocklesby	Lincs	MD	Cu-alloy	75%, split-end missing	36.2	11.5	S.M. 1986, 12, 6	

932	B	Caistor	Lincs	MD	Cu-alloy	95%	42.1	8.4	PP	S.M. record card
933	B	Howell	Lincs	MD	Cu-alloy	95%	35	10	PP	S.M.record card
934	B	Ravendale	Lincs	MD	Cu-alloy	100%	50.8	8.9	PP	S.M. record card
935	B	Swaton	Lincs	MD	Cu-alloy	90%, front-plate of split-end missing	38.7	5.8	PP	S.M. record card
936	B	Torksey	Lincs	MD	Cu-alloy	90%, damaged split-end	54.1	7.5	PP	S.M. record card
937	B	Unprov.	Lincs	MD	Cu-alloy	100%	40.7	8.6	PP	Info. c/o David Haldenby
938	B	Welton-le-Marsh	Lincs	MD	Cu-alloy, enamel inlay eyes	93%	36.5	9.2	PP	S.M. record card
939	B	Welton-le-Marsh	Lincs	MD	Cu-alloy	80%, split-end damaged	33.2	9.1	PP	S.M. record card
940	B	Welton-le-Marsh	Lincs	MD	Cu-alloy	95%	36.5	9.2	PP	S.M. record card
941	B	Willoughby	Lincs	MD	Cu-alloy	90%, split-end damaged	39.5	8.7	PP	S.M. record card
942	B	Withcall	Lincs	MD	Cu-alloy	93%, split-end damaged	55.3	11.7	PP	S.M. record card
943	B	Peabody Site	London	ARCH	Cu-alloy	95%	27	8	M.O.L. sf PEA 87, 491	Blackmore 1989, 121, no. 209, fig. 41
944	B	Westminster Abbey	London	ARCH	Cu-alloy	95%	46	9	M.O.L. sf 50	Goffin 1995, 89, fig. 10, no. 18
945	B	Bawsey	Norfolk	MD	Cu-alloy	95%	46	10	K.L.M. not accessioned	Norfolk SMR no. 12364/128.2
946	B	Bawsey	Norfolk	MD	Cu-alloy	90%, split-end damaged	36	17.2	PP	Norfolk SMR no. 12364/137.1
947	B	Binham	Norfolk	MD	Cu-alloy	90%, split-end damaged	36.7	9.5	PP	Norfolk SMR no. 24150
948	B	Creake, North South	Norfolk	MD	Cu-alloy	90%	40.7	8.9	PP	Norfolk SMR no. site 28242
949	B	Creake, South	Norfolk	MD	Cu-alloy	95%	45.6	9.2	PP	Norfolk SMR no. Site 28242

950	B	Elmham, North	Norfolk	ARCH	Cu-alloy	95%	31.2	7.2	N.C.M.	Goodall, 1980, 503, no. 13, fig. 263
951	B	Elmham, North	Norfolk	ARCH	Cu-alloy	95%	38	9	N.C.M.	Goodall, 1980, 503, no. 14, fig. 263
952	B	Walsingham, Great	Norfolk	MD	Cu-alloy	100%	36.2	8.6	PP	Norfolk SMR
953	B	Walsingham, Great	Norfolk	MD	Cu-alloy	95%	49.4	7.9	PP	Norfolk SMR
954	B	Evenley	Northants	MD	Cu-alloy	90%, very worn	32	7	PP	
955	B	Dorchester	Oxon	ARCH	Cu-alloy	100%	44.6	8.7	?	Henig 1981, 45, no. 19
956	B	Blakenham, Great	Suffolk	MD	Cu-alloy	90%, damaged split-end	30.6	9.6	PP	Suffolk SMR no. BLG 004
957	B	Brandon	Suffolk	ARCH	Cu-alloy	85%, damaged split-end	49.7	10.6	S.C.C.A.S. sf BRD 018.754	
958	B	Brandon	Suffolk	ARCH	Cu-alloy	90%, damaged split-end	32.9	9.2	S.C.C.A.S. sf BRD 018.7120	
959	B	Bromeswell	Suffolk	MD	Cu-alloy	80%, damaged split-end	37.2	7.8	PP	Suffolk SMR no. BML 006
960	B	Coddenham	Suffolk	MD	Cu-alloy	100%	28	8.3	PP	Suffolk SMR no. CDD 037
961	B	Hinderclay	Suffolk	MD	Cu-alloy	90%, damaged split-end	46.3	9	PP	Suffolk SMR no. HNY 017
962	B	Ixworth	Suffolk	MD	Cu-alloy	100%	40.1	7.4	C.U.M.A.A. 01.262	Suffolk SMR no. IXW 018
963	B	Unprov.	Sussex, W	MD	Cu-alloy	100%	44	10.5	C.D.M. 2069	
964	B	Bidford-on-Avon	Warks	MD	Cu-alloy	90%	37	7	Warks County Museum A8043	Seaby & Wise 1995, 90, fig. 2.1
965	B	Downton	Wilts	MD	Cu-alloy	95%	42	9.6	PP	S.S.W.M. record
966	B	Edington	Wilts	MD	Cu-alloy	95%	43	10	D.M. Collections; 1980.97	
967	B	Ramsbury	Wilts	ARCH	Fe, Ag inlay	100%, worn	54.6	10.2	?	Evison 1980, 35, no. 6, fig. 20

968	B	Ryther	Yorks, N	MD	Cu-alloy	90%, damaged split-end	40.8	10	PP	S.M. record card
969	B	Ryther	Yorks, N	MD	Cu-alloy	90%, damaged split-end	36	9	PP	S.M. record card
970	B	Ryther	Yorks, N	MD	Cu-alloy	90%, damaged split-end	58.4	4.9	PP	S.M. record card
971	B	York, Fishergate	Yorks, N	ARCH	Cu-alloy	95%	38.5	8.1	Y.A.T. sf 1986.9 IV, 4736	Rogers 1993, 1350, 1474-5, no. 5318, fig. 652
972	B	York, Paragon Street	Yorks, N	ARCH	Cu-alloy	90%, badly corroded	41.1	7.7	Y.A.T. sf 1988.24, 11954	Moulden et. al. 1999, no. 93, fig. 85a
973	B1	Whipsnade area	Beds	MD	Cu-alloy, niello inlay	95%, split-end damaged	42.7	9.3	Luton Museum	
974	B1	Hinxton Hall	Cambs	ARCH	Cu-alloy	100%	48.6	0	C.C.C.A.S. sf HIN 13	
975	B1	Unprov.	Essex	MD	Cu-alloy	95%	42	7.5	PP	Info. c/o Peter Penfold
976	B1	Unprov.	Essex	MD	Cu-alloy	95%	46	11	PP	Info. c/o Peter Penfold
977	B1	Winchester	Hants	MD	Cu-alloy, Ag, niello inlay	90%, split-end damaged	40	9.9	W.C.M. sf 7823	
978	B1	St Albans, Abbey Orchard	Herts	ARCH	Fe, Au inlay	100%, corroded	47	10	St Albans Museum	
979	B1	Sporle	Norfolk	MD	Cu-alloy	100%	30.7	9.1	PP	Norfolk SMR no. Site 28569
980	B1	Cheddar	Somerset	ARCH	Cu-alloy, niello inlay	95%	56	9	Taunton Museum 05.AA.2/305	Wilson 1979, 282, C.A 90, fig. 95
981	B1	Gisleham	Suffolk	MD	Cu-alloy	75%, split-end damaged	35.3	9.6	PP	Suffolk SMR no. GSE 019; West 1998; 47.5
982	B1	Bishops Cannings	Wilts	MD	Cu-alloy	90%	61.5	10.5	D.M. Collections; 1984.126.6	
983	B2	Unprov.	Essex	MD	Cu-alloy, niello & Ag wire inlay, enamel inlay eyes	85%, split-end damaged	44.6	12.5	PP	Info. c/o Peter Penfold

984	B2	Ringstead	Norfolk	MD	Cu-alloy, niello & Ag wire inlay	95%	60.7	9.4	K.L.M. 3373 A/S display 7.1995	Norfolk SMR no. 29401
985	B2	Barham	Suffolk	MD	Cu-alloy, niello & Ag wire inlay	98%	59.4	12.2	PP	Suffolk SMR no. BRH O18 151; West 1998; 5.31
986	B3	Bledlow	Bucks	OLD	Cu-alloy	90%	101	16	A.Y.B.C.M. 1957.125.1	Head 1942; Wilson & Blunt 1961, 120; Wilson 1964a, 100
987	B3	Unprov.	Kent	MD	Cu-alloy, Ag inlay	100%	53.2	10	PP	Info. c/o Nick Griffiths
988	B3	Bardney	Lincs	MD	Cu-alloy	100%	40.82	11.2	PP	S.M. card
989	B3	Maltby	Lincs	MD	Cu-alloy	95%	47.5	11	PP	S.M. record
990	B3	Caistor by-Norwich	Norfolk	OLD	Cu-alloy	95%	46.3	7.3	N.C.M. 76.94(1716)	
991	B3	Methwold	Norfolk	MD	Cu-alloy	95%	31.5	8.3	PP	Norfolk SMR no. Site 4887
992	B3	Northampton	Northants	ARCH	Cu-alloy	95%	67.5	17.7	?	Goodall 1985, 66, no. 11, fig. 33
993 *2	B4 (manu.)	Fingringhoe	Essex	MD	Lead Alloy	100%	30.4	9.6	PP	Suffolk SMR
994	B4a	Cowlam	Humb, N	MD	Cu-alloy	90%, split-end damaged	45.1	10.5	Hull Museum 1994.297	
995	B4a	Horkstow	Humb, N	MD	Cu-alloy	80%, split-end damaged	52.8	12.3	PP	S.M. record card
996	B4a	Aylesby	Humb, S	MD	Cu-alloy	95%	57.1	11.7	PP	S.M. record card
997	B4a	Beverley	Humb, S	MD	Cu-alloy	95%	49.7	10.7	PP	S.M. record card
998	B4a	Cottam	Humb, S	MD	Cu-alloy	100%	47.1	11.6	PP	Haldenby 1992, 29, no. 1, fig. 3
999	B4a	Cottam	Humb, S	MD	Cu-alloy	100%	46.3	9.6	PP	Haldenby 1990, 56, no. 7, fig. 4
1000	B4a	Ewerby	Lincs	MD	Cu-alloy	97%, R.H. corner of split-end missing	41.1	14.1	S.M. 1996; 136; 2	

1001	B4a	Laughton	Lincs	MD	Cu-alloy	90%, split-end damaged	51	9	PP	S.M. record card
1002	B4a	Lincs, North	Lincs	MD	Cu-alloy	100%	41	10.5	S.M. 1995.112.003	
1003	B4a	Unprov.	Lincs	MD	Cu-alloy	90%, split-end damaged	40.8	10.5	S.M. 1995. 112. 003	S.M. record card
1004	B4a	Ketteringham	Norfolk	MD	Cu-alloy	90%, split-end damaged	43.6	8.5	PP	Norfolk SMR no. 28416
1005	B4a	Hurly Hawkin,	Grampian, Scotland	ARCH	Cu-alloy	100%	46.4	8.6	N.M.S., E. HHA 30	Taylor 1982, 229, no. 30, fig. 6
1006	B4a	Otley	Suffolk	MD	Cu-alloy	100%	43.4	11.3	PP	Suffolk SMR no. OTY 020
1007	B4a	Unprov.	Yorks, N	MD	Cu-alloy	95%	52	9	Y.M. not accessioned	
1008	B4a	York, Fishergate	Yorks, N	ARCH	Cu-alloy	90%, split-end damaged	52.2	8.9	Y.A.T. sf 1986.9 II, 6462	Rogers 1993, 1351, 1475, no. 5320, fig. 652
1009	B4a	York, St Mary,s Abbey	Yorks, N	ARCH	Cu-alloy	95%, front-plate of split-end missing	52.5	8.5	Y.M. SMA 55	Wilson & Blunt 1961, 121; Wilson 1964a, 115; Moulden et. al. 1999, no. 58, fig. 71 (misidentified as Anglian)
1010	B4b	Harpswell	Lincs	MD	Cu-alloy	100%	53.2	11.8	PP	S.M. record card
1011	B4b	York, Coppergate	Yorks, N	ARCH	Cu-alloy	100%	38.7	8.4	Y.M. sf 1977.7, 1898	Moulden et. al. 1999, no. 83, fig. 80I (misidentified as Anglian)
1012	B4b	Pontefract	Yorks, W	MD	Cu-alloy	90%, split-end damaged	46.7	11.4	PP	S.M. record card
1013	B4c	Meols	Cheshire	OLD		100%	55.5	7.5	Lost	Hume, 1863, 125, pl. XI, 1, Bu'lock 1960, 11, fig. 4c; Wilson & Blunt 1961, 121; Wilson 1964a, 109; Griffiths 1991, cat. no. 109, M ST 9, pl. 10
1014	B4c	Goswick, The Links.	Northumberld?	OLD	Cu-alloy	95%	40.2	7.4	B.M. 80; 8-2; 163	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 12, pl. XVII
1015	B4c	Birsay	Orkney, Scotland	ARCH	Cu-alloy	90%, worn, back-plate of split-end missing	45.5	10.1	Electrotype in N.M.S., E. HB 432/1	Curle 1982, 115, no. 432, fig. 39
1016	B4c	Brayton	Yorks, N	MD	Cu-alloy	100%	50.9	9	PP	S.M. record card

1017	B4d	Carlisle Cathedral	Cumbria	ARCH	Cu-alloy	95%	42	11.9	C.A.T. sf Ae 169	Keevil 1988, 17, fig. 2, no. 2
1018	B4d	Whithorn	Dumfries & Galloway, Scotland	ARCH	Cu-alloy	100%, worn terminal	37.5	10.3	?	Nicholson & Hill 1998, 374, BZ19a.5, fig. 10.58
1019	B4d	Aberlady	East Lothian, Scotland	MD	Cu-alloy	90%, split-end damaged	38.7	13.4	N.M.S., E. IG 16	
1020	B4d	Cottam	Humb, N	MD	Cu-alloy	90%, split-end damaged	42.2	13.6	PP	Haldenby 1994, 53-4, no. 5, fig. 2
1021	B4d	Newbald, South	Humb, N	MD	Cu-alloy	90%, split-end damaged	26.9	7.8	PP	Info. c/o Kevin Leahy, S.M.
1022	B4d	Ferriby, South	Humb, S	MD	Cu alloy	90%, split-end damaged	34.7	7.5	PP	S.M. record card
1023	B4d	Exton, Rutland	Leics	MD	Cu-alloy	100%	33.6	12.8	PP	Leics SMR
1024	B4d	Norwich, Bishopsgate	Norfolk	ARCH	Cu-alloy	100%	44	8.6	?	Margeson 1993, 34, no. 227, fig. 20
1025	B4d	Market Weston	Suffolk	MD	Cu-alloy	70%, split-end missing	20.1	7.8	PP	Suffolk SMR no. MKW 007
1026	B4d	Santon Downham	Suffolk	MD	Cu-alloy	80%, split-end missing	24.7	9.2	PP	Suffolk SMR no. STN 027; West 1998; 125.2
1027	B5	Meols	Cheshire	OLD	Cu-alloy	60%, terminal missing	39.5	14	G.M. (Potter Collection)	Hume, 1863, 125, pl. IX, 2; Bu'lock 1960, 11, fig. 4e; Wilson & Blunt 1961, 121; Wilson 1964a, 109; Griffiths 1991, cat. no. 103, M ST 3, pl. 9
1028	B5	Weston	Herts	MD	Cu-alloy, tinned reverse	40%, terminal fragment	25	11.5	PP	B.M. record
1029	B5	Howell	Lincs	MD	Cu-alloy	100%	45.8	11.4	PP	S.M. record card
1030	B5	Ketsby	Lincs	MD	Cu-alloy	75%, split-end missing	24.2	11	PP	S.M. record card
1031	B5	Ipswich	Suffolk	ARCH	Cu-alloy	90%, split-end damaged	53	14.3	S.C.C.A.S. sf IAS 5003.38	Thomas forthcoming

1032	B5	York, 16 22 Coppergate	Yorks, N	ARCH	Antler	Unfinished	115	13	Y.M. 1980.7.8146	Roesdahl et al, 1981, 113, cat no. YAB20; MacGregor et. al. 1999, no. 7697, fig. 902
1033	B5	York, 16-22 Coppergate	Yorks, N	ARCH	Cu-alloy	85%, split-end damaged	47	12	Y.M. 1979.7.5976	Roesdahl et al. 1981, 108, cat. no. YD38
1034	B5	York, 16 22 Coppergate	Yorks, N	ARCH	Lead-alloy	85%, split-end damaged	49	13	Y.M. 1979.7.7 306	Roesdahl et al. 1981, 108, cat. no. YD40; Richardson 1993
1035	B5	York, Fishergate excs.	Yorks, N	ARCH	Cu-alloy	25%, terminal fragment	29.6	16.5	?	Rogers 1993, 1350, 1475, no. 5319, fig. 652
1036	B6	Stour Valley	Dorset	MD	Cu-alloy	100%	33	9.4	PP	Info. c/o Nick Griffiths
1037	B6	Tarrant Crawford	Dorset	MD	Cu-alloy, red enamel inlay?	100%	50	7.5	D.C.M.	Keen 1990, fig. 9
1038	B6	Colchester	Essex	OLD	Cu-alloy	85, back-plate of split-end missing	34	6.7	C. & E.C.M.	Crummy 1981, 21
1039	B6	Winchester, Upper Brook St.	Hants	ARCH	Cu-alloy	95%	59	12	H.H.R.C. 1420. 1	
1040	B6	Barton upon-Humber	Humb, S	MD	Cu-alloy	95%	37	8.3	PP	S.M. record card
1041	B6	Wichling	Kent	MD	Cu-alloy	95%	40	6.7	M.M. MNEMG; 1989. 124a	
1042	B7	Royston	Herts	MD	Cu-alloy	95%	45.5	10.9	PP	B.M. record
1043	B7	Barham	Suffolk	MD	Cu-alloy	95%	38.5	8.9	PP	Suffolk SMR no. BRH 018
1044	B7	Rottingdean	Sussex, E	ARCH	Cu-alloy	90%, split-end damaged	38.1	8.3	?	Norris & Hockings 1953, 61, fig. 5
1045	C	Hamwic	Hants	ARCH	Cu-alloy	50%, shaft broken	25	3.6	S.C.H.	Hinton 1996a, 39, 24/4, fig. 15
1046	C	Hamwic	Hants	ARCH	Ag-alloy	85%, shaft broken	27	3	S.C.H.	Hinton 1980; no 3, fig 13, 1; Hinton 1996a, 39, 5 72, fig. 15
1047	C	Hamwic	Hants	ARCH	Ag	85%, terminal missing	34	2.4	S.C.H.	Hinton 1996a, 38, 33 89, fig. 14
1048	C	Hamwic	Hants	ARCH	Ag-alloy	65%, median fragment	24	2.9	S.C.H.	Hinton 1980; no 2, fig 13; 1; Hinton 1996a, 39, 5 71; fig. 15
1049	C	Jarrow	T & W	ARCH	Cu-alloy	75%, terminal missing	21.5	3	? JA 67 RD	Info. c/o Rosemary Cramp

1050	C1	Hartlepool	Cleveland	ARCH	Cu-alloy	100%	40.7	5.9	?	Jackson 1988; 182, no. 2, fig. 33
1051	C1	Hamwic	Hants	ARCH	Cu-alloy	100%	46	3.9	S.C.H.	Hinton 1996a, 37, 15 5, fig. 14
1052	C1	Hamwic	Hants	ARCH	Cu-alloy	100%	43	3	S.C.H.	Hinton 1996a, 38, 177/53, fig. 14
1053	C1	Hamwic	Hants	ARCH	Cu-alloy	95%	54	3.6	S.C.H.	Hinton 1996a, 38, 44/1, fig. 14
1054	C1	Hamwic	Hants	ARCH	Cu-alloy	95%	54	4	S.C.H.	Addyman & Hill 1969, 68, fig. 27.1; Hinton 1996a, 38, 32/316, fig. 14
1055	C1	Hamwic	Hants	ARCH	Cu-alloy	100%	35	3.1	S.C.H.	Hinton 1996a, 38, 24/17, fig. 14
1056	C1	Hamwic	Hants	ARCH	Cu-alloy	100%	52	2.7	S.C.H.	Hinton 1996a, 38, 24/25, fig. 14
1057	C1	Hamwic	Hants	ARCH	Cu-alloy	100%	47	4.7	S.C.H.	Addyman & Hill; 1969; 68, fig. 27; 2; Hinton 1996a, 38, 32/317, fig. 14
1058	C1	Hamwic	Hants	ARCH	Cu-alloy	95%, bent	60	3.3	S.C.H.	Hinton 1996a, 38, 24/824, fig. 14
1059	C1	Hamwic	Hants	ARCH	Cu-alloy	95%	52	3.3	S.C.H.	Hinton 1996a, 38, 31/910, fig. 14
1060	C1	Hamwic	Hants	ARCH	Ag	85%, split-end damaged	40	3.8	S.C.H.	Hinton 1996a, 38, 36/99 fig. 14
1061	C1	Peabody Site	London	ARCH	Cu-alloy	100%	45	2.5	M.O.L. sf PEA 87.166	Blakmore 1989, 121, no. 208, fig. 41
1062	C1	Royal Opera House	London	ARCH	Cu-alloy	95%	39	3	M.O.L. sf ROP 95.757	
1063	C1	Royal Opera House	London	ARCH	Cu-alloy	95%	40	0	M.O.L. sf ROP 95. 61	
1064	C1	Westminster Abbey	London	ARCH	Cu-alloy	90%, split-end damaged	38	3.5	M.O.L. WA sf 25	Goffin 1995, 89, no. 25, fig. 10, no. 19
1065	C1	Maxey	Northants	ARCH	Cu-alloy	95%	34	7.5	?	Addyman 1964, 62, no. 1, fig. 17
1066	C1	Brandon	Suffolk	ARCH	Cu-alloy	90%, split-end damaged	34.2	2.5	S.C.C.A.S. sf BRD 018 4328	
1067	C2	Hamwic	Hants	ARCH	Cu-alloy	95%	38	3.7	S.C.H.	Hinton 1996a, 39, 20/2, fig. 15

1068	C2	Hamwic	Hants	ARCH	Cu-alloy	95%	45	3.6	S.C.H.	Hinton 1996a, 39, 24/5, fig. 15
1069	C2	Hamwic	Hants	ARCH	Cu-alloy	100%	57	3.5	S.C.H.	Hinton 1996a, 40, 31/622, fig. 15
1070	C2	Hamwic	Hants	ARCH	Cu-alloy	95%	44	3.6	S.C.H.	Hinton 1996a, 38, 169 189, fig. 15
1071	C2	Ipswich	Suffolk	ARCH	Cu-alloy	100%, broken in two.	36.1	3.9	S.C.C.A.S. sf IAS 4801	Thomas forthcoming
1072	D	Hamwic	Hants	ARCH	Cu-alloy	95%, bent	60	9.6	S.C.H.	Hinton 1996a, 40, 169 397, fig. 15
1073	D	Flixborough	Humb, S	ARCH	Cu-alloy	100%	30.2	6	H.F.A. sf 3276	Thomas forthcoming
1074	D	Stallingborough	Humb, S	MD	Cu-alloy	100%	63.1	9.5	PP	S.M. record card
1075	D	Bottesford	Lincs	MD	Cu-alloy	95%, front-plate of split end missing	69.4	19.7	PP	S.M. record card
1076	D	Riby	Lincs	ARCH	Fe	95%	64	13	?	Ottaway 1994, 263, no. 70, fig. 15
1077	D	Scopwick	Lincs	MD	Cu-alloy, gilt	60%, upper fragment	39.8	12.3	PP	S.M. record card
1078	D	Stain	Lincs	MD	Cu-alloy, Ag	95%	34.3	6.7	PP	S.M. record card
1079	D	Torksey	Lincs	MD	Cu-alloy	75%, terminal missing	49.4	11.4	PP	S.M. record card
1080	D	Unprov.	Lincs	MD	Cu-alloy	60%, upper fragment	31.6	15.8	PP	S.M. record card
1081	D	Yarnton, Rectory Farm	Oxon	ARCH	Cu-alloy	85%, split-end damaged	55.2	9.4	O.A.U. sf 792	
1082	D	Unprov.	Yorks, N	MD	Cu-alloy	95%	57.4	14.1	PP	S.M. record card
1083	E	Meols	Cheshire	OLD	Fe	80% very worn	52.7	38	G.M. (Potter Collection)	Hume 1863, pl. XI, 11; Griffiths 1991, 286, no. 102, M/ST 2, pl. 9
1084	E	Royston	Herts	MD	Cu-alloy	10%, attachment end fragment	16.3	22	PP	B.M. record
1085	E	Bardney	Lincs	MD	Cu-alloy	10%, attachment end fragment	16.5	23.9	PP	S.M. record card
1086	E	Burton Pedwardine	Lincs	MD	Cu-alloy	90%, worn terminal	27.9	17.8	PP	S.M. record card

1087	E	Ketsby	Lincs	MD	Cu-alloy	90%, attachment end damaged	21.1	23.6	PP	S.M. record card
1088	E	Ketsby	Lincs	MD	Lead	30%, upper fragment	24.8	24.6	PP	S.M. record card
1089	E	Louth	Lincs	MD	Lead-alloy	25%, upper fragment	19.7	20.2	S.M. not accessioned	
1090	E	Sturton-by-Stow	Lincs	MD	Lead	45%, attachment end missing	21.8	17.2	PP	S.M. record card
1091	E	Sturton-by-stow	Lincs	MD	Cu-alloy	25%, upper fragment	20.3	20.4	PP	S.M. record card
1092	E	Sturton-by-Stow	Lincs	MD	Cu-alloy	10%, attachment end fragment	14.8	20.7	PP	S.M. record card
1093	E	Swallow	Lincs	MD	Cu-alloy	25%, upper fragment	17.4	21.1	PP	S.M. record card
1094	E	Unprov.	Lincs	MD	Lead	30%, attachment end fragment	18.8	19.8	PP	S.M. record card
1095	E	Bawsey	Norfolk	MD	Lead	30%, median fragment	33.2	25.3	N.C.M.	Norfolk SMR no. 12364/36.23
1096	E (manu.)	Bawsey	Norfolk	MD	Lead	80%, attachment end missing	17.4	13.2	N.C.M.	Norfolk SMR no. 25962/41.22
1097	E	Beachamwell	Norfolk	MD	Lead	90%, terminal missing	28	26	PP	Norfolk SMR no. 25267
1098	E	Beachamwell	Norfolk	MD	Cu-alloy	85%, terminal missing	29.7	16.2	PP	Norfolk SMR no. 2635
1099	E	Bircham, Great	Norfolk	MD	Cu-alloy & gilt	95%	30	25	K.L.M. A.1127 192.977	
1100	E	Burnham	Norfolk	MD	Cu-alloy	30%, lower fragment	28.3	21.2	PP	Norfolk SMR
1101	E	Fincham	Norfolk	MD	Cu-alloy	20%, upper fragment	18.8	20.7	PP	Norfolk SMR no. 30053/c7
1102	E	Letheringsett	Norfolk	MD	Cu-alloy	?	-	-	PP	Norfolk SMR no. 30017
1103	E	Quidenham	Norfolk	MD	Cu-alloy, inlay	90%, worn	33.2	15.6	PP	Norfolk SMR no. 31252
1104	E	Ringstead Barrett	Norfolk	MD	Cu-alloy	20%, terminal fragment	19	19	PP	Norfolk SMR no. 1115

1105	E	Newbald, South	Yorks, E	MD	Cu-alloy	95%	28.14	15.1	PP	S.M. record card
1106	E1	St Neots, Eaton Socon	Cambs	ARCH	Cu-alloy	40%, terminal fragment	25.6	20.7	?	Addyman 1965, 66-7, no. 17, fig. 11
1107	E1	Wratting, Great	Essex	MD	Cu-alloy	45%, upper fragment	30.4	27.2	PP	Suffolk SMR
1108	E1	Royston	Herts	MD	Cu-alloy	50%, upper fragment	32.8	29.7	PP	B.M. record
1109	E1	Elloughton	Humb, N	MD	Cu-alloy	30%, median fragment	30.6	29.2	PP	S.M. record card
1110	E1	Bawsey	Norfolk	MD	Lead	25%, lower fragment	21.7	25.4	N.C.M. not accessioned	Norfolk SMR no. 12364/95.19
1111	E1	Bawsey	Norfolk	MD	Lead	75%, terminal missing	33.5	23.8	N.C.M. 245.986	Norfolk SMR no. 21078.32.17
1112	E1	Bawsey	Norfolk	MD	Lead	95%	17.5	25.8	N.C.M. not accessioned	Norfolk SMR no. 21078 124.18
1113	E1	Congham	Norfolk	MD	Cu-alloy	25% terminal fragment	17.5	14.3	PP;	Norfolk SMR no. 25765
1114	E1	Hunstanton	Norfolk	MD	Lead-alloy	45% ,median fragment	34.5	28.1	PP	Norfolk SMR no. 1270
1115	E1	Morton-on the-hill	Norfolk	MD		95%			PP	Norfolk SMR no. 25247
1116	E1	Sheringham, Upper	Norfolk	MD	Cu-alloy, gilt	100%	37	14.3	PP	Norfolk SMR no. 25894
1117	E1	Sheringham, Upper	Norfolk	MD	Cu-alloy, gilt	95%			PP	Norfolk SMR no. 25895
1118	E1	Snoring, Little	Norfolk	MD	Cu-alloy	60%, lower fragment.	21.8	16.2	PP	Norfolk SMR no. 17589
1119	E1	Swandleston	Norfolk	MD	Cu-alloy	95%			PP	Norfolk SMR no. Site 29293
1120	E1ai	Gussage All Siants.	Dorset	MD	Cu-alloy	100%	49.6	23.7	PP	Keen 1988, fig. 11
1121	E1ai	Ampfield	Hants	MD	Cu-alloy	80%, attachment end missing	42.1	30	PP	Hinton 1996a, 216, note 7

1122	Elai	Winchester	Hants	ARCH	Cu-alloy	100%	67	30.7	W.C.M. sf 1369	Wilson 1969, 326-8, pl. LXVII; Backhouse et al. 1984, cat. no. 83; Wilson 1984, 160, pl. 200; Hinton 1990a, 498, no. 1057, fig. 124, pl. KLIIb
1123	Elai	Wilbury Hill, Holwell	Herts	OLD/ ARCH	Cu-alloy	95%	62.5	28.5	C.U.M.A.A. Z 1124.	Kendrick 1938b, pl. 74, no. 4; Wilson 1964a, 114
1124	Elai	Cadney	Humb, S	MD	Cu-alloy	45%, terminal fragment	32.2	25.5	PP	S.M. record card
1125	Elai	Leicester, Highcross Street	Leics	OLD	Bone	90%, R.H. corner of attachment end missing	56	30	J.W.M. 67.1884	Wilson 1964a, 46, note 8; Backhouse 1984, cat no. 133
1126	Elai	Brocklesby	Lincs	MD	Cu-alloy	95%	31.1	16.3	S.M. 1986; 12; 2	
1127	Elai	Brocklesby	Lincs	MD	Cu-alloy	40%, median fragment	26.6	24.4	S.M. 1989; 363; 2	
1128	Elai	Ketsby	Lincs	MD	Cu-alloy	55%, median fragment	25	24.5	PP	S.M. record card
1129	Elai	Torksey	Lincs	MD	Cu-alloy	95%	67	17	PP	S.M. record card
1130	Elai	Willoughby	Lincs	MD	Lead	95%	39.6	9.3	PP	S.M. record card
1131	Elai	St Peter's Hill	London	ARCH	Cu-alloy	95%	54	29	?	Pritchard 1992, 145-7, fig. 3.26
1132	Elai	London?	London?	OLD	Bone or ivory	100%	51.8	25.9	M.O.L.	Smith 1909, 164, fig. 22; Anon, London Guildhall catalogue 1908, pl. LII, no. 14; Wilson 1964a, 108
1133	Elai	Congham	Norfolk	MD	Cu-alloy	95%	57.3	25.9	N.C.M. case 2, no.2 on loan	Norfolk SMR no. 3560
1134	Elai	Cranwich	Norfolk	MD	Cu-alloy	90%, attachment plate damaged	46.4	28.4	PP	Norfolk SMR no. 1039 c20
1135	Elai	Creake, North	Norfolk	MD	Cu-alloy	100%	54.2	26.1	PP	Norfolk SMR no. 11707
1136	Elai	Oxborough	Norfolk	MD	Cu-alloy	93%, damaged split-end	58	27.4	N.C.M. 412.985	Norfolk SMR no. 21079
1137	Elai	Thetford	Norfolk	OLD/ ARCH	Lead	95%	38.6	25.2	N.C.M. 1426 Fitch coll. 76.94	Kendrick 1938b, 380-1, pl. LXXIV, 2; Wilson 1964a, 113; Goodall 1984, 69, no. 28, fig. 111

1138	Elai	Unprov.	Unprov.	OLD	Cu-alloy	95%	66.4	28	B.M. 1903, 6-23, 95	Kendrick 1938b, 380-1, pl. LXXIV, 1; Wilson 1964a, cat. no.148, Backhouse et al. 1984, cat. no. 80
1139	Elai	Harnham	Wilts	MD	Cu-alloy	95%	48	30	D.M. Collections; 1985.83	
1140	Elaii	Chester	Cheshire	ARCH	Bone	95%	56.6	20.5	G.M. (Potter Collection)	Griffiths 1991, 260, no. 13 ,CHE/ST1, pl. 2; Lloyd-Morgan 1994, 98, no. 1, fig. 11.2
1141	Elaii	Charmouth	Dorset	MD	Cu-alloy	95%	0	0	PP	Photo in Bristol City Museum
1142	Elaii	Winchester	Hants	ARCH	Cu-alloy	100%	56	28	W.C.M. sf 6624	Backhouse et al. 1984, cat. no. 82; Hinton 1990a, 497, no. 1056, fig. 125, pl. XLIIa
1143	Elaii	Winchseter, nr	Hants	MD	Cu-alloy	90%, L.H. corner of attachment end missing	51	23	PP	Info. c/o David Haldenby
1144	Elaii	Boxley	Kent	MD	Cu-alloy	80%, attachment-plate missing	51	26	PP	Kelly 1990, 288-90, fig. 3, no. 2
1145	Elaii	Louth	Lincs	MD	Cu-alloy	95%, attachment end damaged	42	24.2	S.M. not accessioned	
1146	Elaii	Maltby-le-Marsh	Lincs	MD	Cu-alloy	90%, attachment-end damaged	43	24	PP	S.M. record card
1147	Elaii	Bylaugh	Norfolk	MD	Lead-alloy	100%, broken in two	44.9	22.5	PP	Norfolk SMR no. 25690
1148	Elaii	Bylaugh	Norfolk	MD	Cu-alloy	100%	63.7	22.1	PP	Norfolk SMR no. 25690
1149	Elaii	Ixworth	Suffolk	OLD	Cu-alloy	95%, attachment end damaged, Ag inlay missing	56	31.3	A.M. 1909.446	Kendrick 1938b, 380, pl. LXXIV, 3; Wilson 1964a, 106; Hinton 1974, cat. no. 17, pl. VIII; Backhouse et al. 1984, cat. no. 81
1150	Elaii	Chichester, nr	Sussex, W	MD	Cu-alloy	90%	40	20	PP	Info. c/o David Haldenby
1151	Elb	Meols	Cheshire	OLD	Cu-alloy	95%	47	24.5	G.M. (Potter collection)	Wilson 1964a, 109, Bu'Lock 1960, 13, fig. 4f; Griffiths 1991, 285, cat. no. 101, M/ST 1, pl. 9
1152	Elb	Gussage area	Dorset	MD	Cu-alloy, Fe rivets	98%	33	19	PP	Info. c/o Nick Griffiths

1153	E1b	Canvey, Leigh Beck 174	Essex	MD	Cu-alloy	90% attachment end damaged	39	30	PP	Info. c/o E.C.C.A.S
1154	E1b	Unprov.	Essex	MD	Cu-alloy	95%	35	17	PP	Info. c/o Peter Penfold
1155 *2	E1b	Bentley	Hants	MD	Cu-alloy	90%	46	0	PP	Info. c/o H.C.C.M.S
1156	E1b	Hartley Maudit	Hants	MD	Cu-alloy	75%, attachment end missing	0	0	PP	Info. c/o H.C.C.M.S
1157	E1b	Winchester	Hants	ARCH	Cu-alloy	95%	49	26.5	W.C.M. sf 6810	Backhouse et al. 1984, cat. no. 84; Hinton 1990a, 499, no. 1060, fig. 125, pl. XLIIIa
1158	E1b	Winchester	Hants	ARCH	Cu-alloy	75%, attachment end missing	46	17.2	W.C.M. sf 2614	Hinton 1990a, 500, no. 1061, fig. 125, pl. XLIVa
1159	E1b	Buccombe Down	Isle of Wight	OLD	Cu-alloy	100%	50.2	21.6	Carisbrook Castle Museum	Wilson 1975, fig. 25; Hinton 1990a, 496, note 17
1160	E1b	Goltho	Lincs	ARCH	Cu-alloy	95%	52	15	B.M.	
1161	E1b	Owersby	Lincs	MD	Lead	50%, lower fragment	31.9	23.3	PP	S.M. record card
1162	E1b	Pointon	Lincs	MD	Cu-alloy	90%, terminal missing	42.9	17.7	PP	S.M. record card
1163	E1b	Torksey	Lincs	MD	Cu-alloy	93%, worn	28.1	19	PP	Info. c/o David Haldenby
1164	E1b	Brampton	Norfolk	MD	Cu-alloy	80%, attachment end missing	21	14.8	PP	Norfolk SMR no. 1124
1165	E1b	Costessey	Norfolk	MD	Cu-alloy	93%	54.5	23.2	N.C.M. 212.986 (3)	Norfolk SMR no. 22217
1166	E1b	Fring	Norfolk	MD	Cu-alloy	70%, upper fragment	27.8	18	PP	Norfolk SMR no. Site 23001
1167	E1b	Tatterset/Tattert horpe	Norfolk	MD	Cu-alloy	60%, median fragment	30.4	19.6	PP	Norfolk SMR
1168	E1b	Bentley	Suffolk	MD	Lead	85%, split-end damaged	34.3	19.7	PP	Suffolk SMR no. BTY 012
1169	E1b	Unprov.	Unprov.	MD	Cu-alloy	95%	44	19	B.M. 1989; 3-2; 2	
1170	E1b	St Arvans, Monmouthshire	Wales	MD	Cu-alloy	90%, attachment-end damaged	42	21.5	PP	Info. c/o Mark Redknap, NMW, C.

1171	E1b	York, 16-22 Coppergate	Yorks, N	ARCH	Bone	95%	62	25	Y.M. 1979.7 6833	Roesdahl 1981, 115, YAB44; Backhouse et al. 1984, cat. no. 20; MacGregor et. al. 1999, no. 6800, fig. 902
1172	E1b	York, Coppergate	Yorks, N	ARCH	Cu-alloy	100%	58	26	Y.M. 1980 7.7501	Roesdahl 1981, 108, YD36
1173	E1c	Shenley Church End	Bucks	MD	Cu-alloy	90%, damaged attachment end	50	26	PP	Bucks SMR no. 3576
1174	E1c	High Easter	Essex	MD	Cu-alloy	95%, attachment end damaged	50	22.6	PP	Cuddeford 1996, fig. 11.7
1175	E1c	Newbald, South	Humb, N	MD	Cu-alloy	70%, damaged attachment end	29.3	19.1	PP	S.M. record card
1176	E1c	Ferriby, South	Humb, S	MD	Cu-alloy	90%, damaged attachment end	38	19.5	S.M. 1995. 122.21	
1177	E1c	Winteringham	Humb, S	MD	Cu-alloy	50%, upper fragmant	33.5	23.9	PP	S.M. record card
1178	E1c	Minster-in-Thanet	Kent	MD	Cu-alloy	95%	57	20	PP	Info. c/o David Haldenby
1179	E1c	Ashby-de-la Zouch	Leics	MD	Cu-alloy	95%	27.6	24.6	PP	Leics SMR
1180	E1c	Ashby de-la Zouch	Leics	MD	Cu-alloy	85%, terminal missing	33.6	20.9	PP	Leics SMR
1181	E1c	Harpswell	Lincs	MD	Lead	100%	28.3	27	S.M. 1996; 145; 1	
1182	E1c	Laughton	Lincs	MD	Cu-alloy	100%	38.7	19.8	PP	S.M. record card
1183	E1c	Ravendale	Lincs	MD	Cu-alloy	90% terminal missing	34.1	20	S.M. 1986.25.6	S.M. record card
1184	E1c	Ganwich	Norfolk	MD	Cu-alloy	95%			PP	Norfolk SMR
1185	E1c	Harling	Norfolk	ARCH	Cu-alloy	90%, terminal missing	30.8	20.6	N.C.M. 51 989 21	Margeson 1995, 60, no. 75, fig. 41
1186	E1c	Heacham	Norfolk	MD	Cu-alloy	80%, attachment plate missing	32.8	21.9	PP	Norfolk SMR no. 16297
1187	E1c	Kenninghall	Norfolk	MD	Cu-alloy	65%, upper fragment	28.4	22	PP	Norfolk SMR no. 19026

1188	E1c	Lexham, West	Norfolk	MD	Cu-alloy	95%	54.5	21	PP	Norfolk SMR no. 28740
1189	E1c	Newton Flotman	Norfolk	MD	Cu-alloy	75%, terminal missing	29.7	20.3	PP	Norfolk SMR no. 32278
1190	E1c	Oxborough	Norfolk	MD	Lead	100%	42	22.5	PP	Norfolk SMR no. 1021
1191	E1c	Snettisham	Norfolk	MD	Cu-alloy	95%, attachment end damaged	52.9	19.7	PP	Norfolk SMR no. 1691
1192	E1c	Spixworth	Norfolk	MD	Cu-alloy	80%, attachment end damaged	36.1	19.5	PP	Norfolk SMR no. 32216
1193	E1c	Tatterset	Norfolk	MD	Cu-alloy	85%, upper fragment	36.3	18.4	PP	Norfolk SMR no. 32605
1194	E1c	Whissonsett	Norfolk	MD	Cu-alloy	85%, terminal missing	29.4	18.5	PP	Norfolk SMR no. 31800
1195	E1c	Raunds	Northants	MD	Cu-alloy	90%, damaged attachment end	46	21	PP	Info. c/o James Graham-Campbell, U.C.L.
1196	E1c	Alciston	Sussex, E	MD	Cu-alloy	90%, attachment plate damaged	32.8	19.3	PP	Info. c/o David Haldenby
1197	E1c	Ryther	Yorks, N	MD	Cu-alloy	30%, lower fragment	26.4	24.9	PP	S.M. record card
1198	E1c	Ryther	Yorks, N	MD	Cu-alloy	90%, damaged attachment end	31	20.1	PP	S.M. record card
1199	E1c	York, Lloyds Bank	Yorks, N	ARCH	Cu-alloy	85%, attachment plate missing	46	26.8	Y.M.	MacGregor 1982, 89, fig. 46. Pl. III b & c
1200	E2	Creake, North	Norfolk	MD	Cu-alloy	95%	52.6	32.3	PP	Norfolk SMR no. 11707
1201	E2ai	Norwich, Castle	Norfolk	ARCH	Cu-alloy	93%, top L.H. corner of attachment end damaged.	49.5	17.2	N.C.M. sf 204	Margeson & Williams 1985, 29, no. 4, fig. 24, pl. XVI
1202	E2ai	Oxborough	Norfolk	MD	Cu-alloy	100%, decoration worn	46.7	18	PP	Norfolk SMR no. 2634; Margeson & Williams 1985, 29, no. 4, fig. 25
1203	E2ai	Stow Bedon	Norfolk	MD	Cu-alloy	40%, lower fragment	26	15	PP	Info. c/o Clive Warren
1204	E2ai	York, Wellington Row	Yorks, N	ARCH	Cu-alloy	60%, lower fragment	19.9	14.8	Y.A.T. 1988.24.6732	Moulden et. al. 1999, no. 95, fig. 86, j

1205	E2aii	Unprov.	Essex	MD	Cu-alloy	95%	36	16	PP	Info. c/o Peter Penfold
1206	E2aii	Kenninghall	Norfolk	MD	Cu-alloy	90%, attachment end damaged	40.5	15.8	PP	Norfolk SMR no. 19026
1207	E2aii	Oxborough	Norfolk	MD	Cu-alloy	75%, damaged attachment end	27	16.5	PP	Norfolk SMR no. 20625
1208	E2aii	Ringstead Barrett	Norfolk	MD	Cu-alloy	90%, attachment end damaged	42	17	PP	Norfolk SMR no. 1115
1209	E2bi	North Lincs	Lincs	MD	Cu-alloy	90%, damaged attachment end	29.6	19.4	PP	S.M. record card
1210	E2bi	Beachamwell	Norfolk	MD	Cu-alloy	75%, damage to terminal and attachment end	45	23	PP	Norfolk SMR no. 25476
1211	E2bi	Binham	Norfolk	MD	Cu-alloy	40%, lower fragment	21.5	25.8	PP	Norfolk SMR no. 24151 c
1212	E2bi	Bradwell	Norfolk	MD	Cu-alloy	90%, lower R.H. side missing	52.8	23.7	PP	Norfolk SMR no. 18861
1213	E2bi	Fincham	Norfolk	MD	Cu-alloy	85%, broken in two and lower portion missing	42.5	20.3	PP	Norfolk SMR no. 28227
1214	E2bi	Gunthorpe	Norfolk	MD	Cu-alloy	75%, median fragment	35.7	22.8	PP	Norfolk SMR no. 24568
1215	E2bi	Eyke	Suffolk	MD	Cu-alloy	75%, split-end damaged and tongue terminal missing	41.1	25.6	PP	Suffolk SMR
1216	E2bi	Ipswich	Suffolk	ARCH	Cu-alloy	100%	55.4	24.2	S.C.C.A.S. sf IAS 4801.78	Thomas forthcoming
1217	E2bii	Unprov.	East Anglia	MD	Cu-alloy	90%, damaged attachment end	50	21.3	PP	B.M. record
1218	E2bii	Royston	Herts	MD	Cu-alloy	60%, median fragment	37.4	26.9	PP	B.M. record
1219	E2bii	Caistor	Lincs	MD	Cu-alloy	90%, attachment end damaged	47	23.8	PP	S.M. record card
1220	E2bii	Barnham Broom	Norfolk	MD	Cu-alloy	75%, terminal missing	32	18.7	PP	Norfolk SMR no. 25757; Gurney 1991, fig. 5, no. 3

1221	E2bii	Colkirk	Norfolk	MD	Cu-alloy	100%	53.5	27.4	PP	Norfolk SMR no. 30016
1222	E2bii	Hunstanton	Norfolk	MD	Cu-alloy	70%, dmaged attachment end	39	26.5	PP	Norfolk SMR no. 21714
1223	E2bii	Stow Bedon	Norfolk	MD	Cu-alloy	95%	53.2	26	PP	Info. c/o Clive Warren
1224	E2biii	Winterbourne, Bristol	Avon	MD	Cu-alloy	90%, attachment end damaged	56	2.5	B.C.M. 81/1986	Stewart 1987, fig. 1
1225	E2biii	Monknash	South Glamorgan, Wales	MD	Cu-alloy	90%, attachment end damaged	58	23	PP	Redknap 1991, 78
1226	E3	Carlisle Cathedral	Cumbria	ARCH	Cu-alloy	100%	27.5	17	C.A.U. sf AE 208	
1227	E3	Carlisle Cathedral	Cumbria	ARCH	Cu-alloy	100%	28.1	18	C.A.U. sf AE 221	
1228	E3	Carlisle Cathedral	Cumbria	ARCH	Cu-alloy	100%	34.9	12.9	C.A.U. sf AE 133	
1229	E3	Carlisle Cathedral	Cumbria	ARCH	Cu-alloy	100%	50	21.4	C.A.U. sf AE 183	Keevil 1988, 17, fig. 2, no. 3
1230	E3	Royston	Herts	MD	Cu-alloy	85% attachment end missing	33.8	16.2	PP	B.M. record
1231	E3	Cottam	Humb, N	MD	Cu-alloy	100%	47.8	22.4	PP	Haldenby 1992, 31, no. 9, fig. 3
1232	E3	Pocklington	Humb, N	MD	Cu-alloy	90%, attachment end damaged	39.2	20.8	PP	A.R.C. artefact sheet
1233	E3	Peel Castle	Isle of Man	ARCH	Cu-alloy	100%	42.4	20.4	?	Graham-Campbell forthcoming
1234	E3	Louth	Lincs	MD	Cu-alloy	100%	35.8	15	S.M. not accessioned	
1235	E3	Louth	Lincs	MD	Cu-alloy	100%	26	9.9	S.M. not accessioned	
1236	E3	Louth	Lincs	MD	Cu-alloy	95%	28	13.4	S.M. not accessioned	
1237	E3	Bawsey	Norfolk	MD	Cu-alloy	100%	36.2	16.2	N.C.M. not accessioned	Norfolk SMR no. 12364/79.15
1238	E3	Oxborough	Norfolk	MD	Cu-alloy	95%, attachment end damaged	46.7	16	PP	Norfolk SMR no. 1021

1239	E3	Stow Bedon	Norfolk	MD	Cu-alloy	100%	46.9	17.7	PP	Norfolk SMR
1240	E3	Nacton	Suffolk	MD	Cu-alloy	95%	49.3	24.7	PP	Suffolk SMR no. NAC 033
1241	E3	Unprov.	Unprov.	MD	Cu-alloy	75%, attachment end damaged	34.9	16.4	PP	Info. c/o David Haldenby
1242	E3	Norton, Malton	Yorks, N	MD	Cu-alloy	100%	30.2	18	PP	A.R.C. artefact sheet
1243	E3	Unprov.	Yorks, N	MD	Cu-alloy	95%	41.7	16.2	PP	S.M. record card
1244	E4a	Unprov.	Essex	MD	Cu-alloy	100%, broken in two medially	54	26	PP	Info. c/o Peter Penfold
1245	E4a	Bawsey	Norfolk	MD	Cu-alloy	95%	25.5	28.5	PP	Norfolk SMR no. 12364.85.16
1246	E4a	Hillington	Norfolk	MD	Cu-alloy	100%	30.1	24.9	PP	Norfolk SMR no. 29913; Gurney 1994, fig. 3, no. 2; Thomas 1996, 88, fig. 3C
1247	E4a	Taverham	Norfolk	MD	Cu-alloy	95%	32.1	25.7	PP	Info. c/o Helen Geake, N.C.M
1248	E4b	Workington, St Michael's church	Cumbria	ARCH	Cu-alloy	100%	48.1	14	C.A.U. sf SMW Ae3	
1249	E4b	Weston	Herts	MD	Cu-alloy, enamel inlay	60%, lower fragment	42	20.2	PP	Info. c/o B.M.
1250	E4b	Hatcliffe	Lincs	MD	Lead	30%, median fragment	0	0	PP	Info. c/o David Haldenby
1251	E4b	Blo Norton	Norfolk	MD	Cu-alloy	75%, bottom missing	34.4	21.3	PP	Norfolk SMR no. 20038; Richardson 1993, 34; Margeson 1997, 21, fig. 23
1252	E4b	Thelnetham	Suffolk	MD	Cu-alloy	95%	47.3	17.8	PP	Suffolk SMR no. THE 016
1253	E4b	Unprov.	Unprov.	MD	Cu-alloy	85% attachment end damaged	45.3	16.2	PP	Info. c/o David Haldenby
1254	E4c	Buntingford	Herts	MD	Cu-alloy, white enamel inlay	75%, attachment end missing	43	20	PP	Info. c/o David Haldenby
1255	E4c	Creake, North	Norfolk	MD	Cu-alloy	99%, nick out of R.H. rivet hole	30.7	15.4	PP	Norfolk SMR no. 25777

1256	E4c	Walsingham, Great	Norfolk	MD	Cu-alloy	100%	63.1	30.1	PP	Norfolk SMR no. 2024; Margeson 1996, fig. 7; Margeson 1997, fig. 23
1257	E4c	York, St Mary Bishopshill Senior	Yorks, N	ARCH	cu-alloy	95%	43.5	13.2	Y.M. 1973.24	Wilson 1965b, 154-5, fig. 29; Wilson 1975, 206, fig. 26; Graham-Campbell 1980, cat. no. 186; Roesdahl et al. 1981, 108, 121; YD 39; Richardson 1993, 76-8
1258	E5	Winchester	Hants	ARCH	Ag, gilt	100%	40	20.8	W.C.M. sf 272	Wilson 1965a, 262-3, pl. LXXIXa ; Graham-Campbell 1980, cat. no. 188; Hinton 1990a, 498-9, no. 1059, fig. 125, pl. XLIIIb
1259	E5	Pocklington	Humb, N	MD	Cu-alloy	95%	56.8	24.8	PP	A.R.C. artefact sheet
1260	E5	Bluebell Hill	Kent	MD	Cu-alloy	95%	25	11.7	PP	B.M. record
1261	E5	Shorne	Kent	MD	Cu-alloy	50%, terminal fragment	25	17	PP	M.O.L. catalogue of MD finds 24.4.96
1262	E5	Goltho	Lincs	ARCH	Cu-alloy, gilt	95%	45	21	A178	Info. c/o B.M.
1263	E5	Ashwellthorpe	Norfolk	MD	Cu-alloy	95%, attachment end damaged	62.9	23.7	PP	Norfolk SMR
1264	E5	Bawburgh	Norfolk	MD	Cu-alloy	75%, upper third missing	30.2	20.1	PP	Norfolk SMR no. 24639 c
1265	E5	Buxton-With-Lamas	Norfolk	MD	Cu-alloy	50%, upper half missing	22.1	17.2	PP	Norfolk SMR no. 7695
1266	E5	Congham	Norfolk	MD	Cu-alloy	100%, worn	41.9	14.8	PP	Norfolk SMR no. 3565
1267	E5	Kelling	Norfolk	MD	Cu-alloy	100%	38.1	15	PP	Norfolk SMR
1268	E5	Melton Constable	Norfolk	MD	Cu-alloy	80%, terminal missing	49.2	32.1	PP	Norfolk SMR no. 24010
1269	E5	Rudham, West	Norfolk	MD	Cu-alloy	100%, broken in two	53.3	25.7	PP	Norfolk SMR no. 32133
1270	E5	Salle	Norfolk	MD	Cu-alloy	40%, median fragment	35.2	22.9	PP	Norfolk SMR
1271	E5	Thetford	Norfolk	ARCH	Lead-alloy	70%, attachment end missing	38.7	30	?	Goodall 1993, 95, no. 6, fig. 115

1272	E5	Nottingham, Halifax Place	Notts	ARCH	Cu-alloy	100%	50.1	20.3	Nottingham Museum sf 90	
1273	E5	Bures-St-Mary	Suffolk	MD	Cu-alloy	75%, attachment end missing	41.1	25	PP	Suffolk SMR no. BSM Misc
1274	E5	Wangford	Suffolk	MD	Cu-alloy	60%, upper fragment	26.4	17	PP	Suffolk SMR no. WNG 016
1275	E6	Aspatria	Cumbria	OLD/ ARCH	Au	95%	48.9	17.8	Lost	Edwards 1992, 43-4, fig. 5.1d
1276	E6	Unprov.	East Anglia	MD	Cu-alloy	75%, lower third missing	48.7	31.5	PP	B.M. record
1277	E6	Alkborough	Humb, S	MD	Cu-alloy	50%, median fragment	34	25	PP	S.M. record card
1278	E6	Whitton	Humb, S	MD	Cu-alloy	100%	41	23.8	PP	S.M. record card
1279	E6	Balladoole, Arbory	Isle of Man	ARCH	Ag, gilt	100%	44	28.6	?	Bersu & Wilson 1966, 40, no. 24, pl. VIIIa
1280 *2	E6	Balladoole, Arbory	Isle of Man	ARCH	Cu-alloy, gilt	100%	44.5	21.3	?	Bersu & Wilson 1966, 37-9, nos 21 & 22, pl. VIIb
1281	E6	Huncote	Leics	MD	Cu-alloy	95%	28.2	13.5	PP	Leics SMR
1282	E6	Laughton	Lincs	MD	Cu-alloy	100%	40.7	19.7	PP	S.M. record card
1283	E6	Owersby	Lincs	MD	Cu-alloy, gilt, Ag rivets	95%	37.7	23.7	S.M. 1986; 6; 2	S.M. record card
1284	E6	Unprov.	Lincs	MD	Cu-alloy, gilt	90%, damaged lower end	30.2	15	PP	Info. c/o David Haldenby
1285	E6	Bull Wharf	London	ARCH	Cu-alloy	95%	29.3	14.8	M.O.L. sf BUF 90.198	
1286	E6	Bunwell	Norfolk	MD	Cu-alloy	60%, upper third missing	36	23.6	PP	Norfolk SMR no. 10007
1287	E6	Forncett	Norfolk	MD	Cu-alloy	95%, terminal worn	30.1	14.3	PP	Norfolk SMR no. 31949
1288	E6	Harling	Norfolk	MD	Cu-alloy	95%	49.5	26.5	PP	Norfolk SMR no. 6029
1289	E6	Swainsthorpe	Norfolk	MD	Cu-alloy	50%, lower fragment	29.5	16	PP	Norfolk SMR no. 9724

1290	E6	Tatterset	Norfolk	MD	Cu-alloy	60% lower fragment	29.1	19.5	PP	Norfolk SMR no. 2373
1291	E6	Flowton	Suffolk	MD	Cu-alloy, gilt	95%	30.5	20.9	PP	Suffolk SMR no. FLW 004
1292	E6	Freckenham	Suffolk	MD	Cu-alloy	100%	31.5	17.1	PP	Suffolk SMR no. FRK 009
1293	E6	Wetheringsett cum Brockford	Suffolk	MD	Cu-alloy, gilt	90%, damaged at L.H. corner of attachment end	32.2	16.7	PP	Suffolk SMR no. WCB 029; West 1998, 134.15
1294	E6	Potterne	Wilts	MD	Cu-alloy, enamel inlay	100%	30	16	D.M. Collections; 1994.40	
1295	E6	York, 16 22 Coppergate	Yorks, N	ARCH	Cu-alloy	100%	49.5	30.2	Y.M. 1980.7.11100	Roesdahl et al. 1981; 127, YTC17
1296	E7	Unprov.	Essex	MD	Lead-alloy	95%	49.8	22.9	PP	Info. c/o Peter Penfold
1297	E7	Hedon	Humb, N	MD	Cu-alloy	90%, worn terminal	51.3	22.4	Hull Museum	
1298	E7	Gainsborough	Lincs	MD	Lead	100%	44.1	20.7	PP	S.M. record card
1299	E7	Hindolveston	Norfolk	MD	Cu-alloy	95%	56.4	25.3	N.C.M. 254.986	Norfolk SMR no. 22214
1300	E7	Ipswich	Suffolk	MD	Lead/Lead-alloy	95%	49.8	13.8	PP	Suffolk SMR
1301	F1	Unprov.	Colonsay, Scotland	MD	Cu-alloy	95%	46	11	Inverness Museum entry 1156	Info. c/o Caroline Richardson
1302	F1	Cronk Moar, Jurby	Isle of Man	ARCH	Cu-alloy	90%, damaged terminal	52	12.9	?	Bersu & Wilson 1966, 75, no. 3, pl. XVI, b
1303	F1	Ashby de-la-Launde	Lincs	MD	Cu-alloy	100%, corroded	52.5	15.6	S.M. 1991; 458; 2	
1304	F1	Field Dalling	Norfolk	MD	Cu-alloy	100%	52	10.9	PP	Norfolk SMR no. 31043
1305	F1	Glandford	Norfolk	MD	Cu-alloy	95%	61.9	17.2	PP	Norfolk SMR
1306	F1	Udal	Noth Uist, Scotland	ARCH	Cu-alloy	30%, lower fragment	32.5	12	?	Graham-Campbell 1973

1307	F1	Ashaig	Skye, Scotland	MD	Cu-alloy	100%	46.5	10	Dualchas; Skye and Lochalsh Museums Acc. 1994.1	Miket 1994, 43, fig. 21
1308	F1	Easingwold	Yorks, N	MD	Cu-alloy	100%	45.6	11.9	PP	A.R.C. artefact sheet
1309	F1	Saxton, Barkston	Yorks, N	MD	Cu-alloy	100%	38	11.8	PP	S.M. record card
1310	F2	Norwich, S.Bypass.	Norfolk	MD	Cu-alloy	90%	49.6	9.9	N.C.M.	Norfolk SMR
1311	F2	Pickenham, North	Norfolk	MD	Cu-alloy	100%	32.4	9.4	PP	Norfolk SMR no. 24012
1312	F2	Polstead	Suffolk	MD	Cu-alloy, Ag ?	100%	52.2	15.5	I. M. 1992.11.4	Suffolk SMR no. PLS 009; West 1998; 2.6 (Badwell Ash)
1313	F2	Thorpe Salvin	Yorks, S	MD	Cu-alloy	25%, terminal fragment	26.1	12.2	S.C.M. 1986.48	Hart 1989, 189, fig. 1
1314	G	Frewick Links	Highland, Caithness, Scotland	ARCH	Cu-alloy	100%	46.4	12.2	?	Batey 1987, pl. 21, c; O'Meahdra 1993, 436
1315	G	Great Mundon	Herts	MD	Cu-alloy	100%	44.4	10.5	PP	B.M. record
1316	G	Ferriby, South	Humb, S	MD	Cu-alloy, enamel inlay	90%, front plate of split-end missing	39.7	13.1	S.M. 1996. 112.14	
1317	G	Grimsby	Lincs	MD	Cu-alloy, gilt	95%	46.4	14.3	PP	S.M. record card
1318	G	Ketsby	Lincs	MD	Cu-alloy	95%, terminal damaged	45.8	8.1	PP	S.M. record card
1319	G	Ketsby	Lincs	MD	Cu-alloy	100%	47	12.4	PP	S.M. record card
1320	G	Louth	Lincs	MD	Cu-alloy	90%, terminal damaged	45.9	8.2	S.M. not accessioned	
1321	G	Withcall	Lincs	MD	Cu-alloy	100%	48.3	13.3	PP	S.M. record card
1322	G	Norwich	Norfolk	MD	Cu-alloy	100%	41	11.1	PP	Margeson 1997, .37, fig. 42
1323	G	Doncaster	Yorks, S	ARCH	Cu-alloy	100%	47.7	12.5	Doncaster Museum 1997.28	Buckland et al. 1989, 231, no. 17, fig. 230

1324	H	Ferriby, South	Humb, S	MD	Cu-alloy	90%, split-end damaged	44.7	13.3	PP	S.M. record
		Description: Cast strap-end with expanded trapezoidal plate decorated with Ringerike-style foliate ornament. A highly stylised animal head marks the junction between the plate and wedge-shaped split-end which is pierced by two rivet holes for attachment.								
1325	H	Goltho	Lincs	ARCH	Cu-alloy	100%	45.8	15.5	?	Goodall 1987b
		Description: Cast strap-end with slightly expanded trapezoidal plate, decorated with very stylised Ringerike-style foliate ornament. A slightly raised moulding depicting an animal head marks the junction between the plate and the wedge-shaped split-end which was attached using a single centrally placed copper alloy rivet.								
1326	H	Jarlshof	Shetland, Scotland	ARCH	Cu-alloy, gilt	85%, split-end missing	45	33.7	NMS, E. HSA 864/ 1910-152 (Jarlshof find no. 1355)	Hamilton 1956, pl. XXIX, 1; Fuglesang 1980, cat. no. 55, pl. 32A
		Description: Lozenge-shaped double sided strap-end with incised and punched decoration highlighted with gilding. The intricate Ringerike-style decoration is described by Fuglesang (see ref).								
1327	H	Ogbourne-St-George	Wilts	MD	Cu-alloy	95%	35	19.5	Swindon Museum B1990 44	
		Description: Cast strap-end with a recessed rectangular attachment plate and tongue in the form of profiled Urnes-style gripping beast executed in the round. The forefoot of the creature grips the base of its tail with a three-clawed paw, while the hind foot, which lacks discernible claws, grips its neck. The end of the creature's tail is held lightly in a slightly opened mouth.								
1328	H	Upavon	Wilts	MD	Cu-alloy	95%	44	11	On loan to D.M. 1996. 17	D.M. Collections Day Book 1799.3
		Description: Cast parallel-sided strap-end pierced by a pair of rivet holes at the split-end for attachment. The shaft is of D-shaped section and is decorated in relief with densely intertwined foliate tendrils in the Ringerike style.								
1329	I	Maiden Bower	Beds	MD	Cu-alloy	100%	30.8	9.2	PP	Info. c/o Michael Farley, B.C.C.A.S.
1330	I	Unprov.	Essex	MD	Cu-alloy	100%	38.5	9.5	PP	Info. c/o Peter Penfold
1331	I	Kirmington	Humb, N	MD	Cu-alloy	100%	34.5	9.5	PP	S.M. record card

1332	I	Harpswell	Lincs	MD	Cu-alloy	100%	36.2	11.1	PP	S.M. record card
1333	I	Swinhope	Lincs	MD	Cu-alloy	100%	38.5	9.8	PP	S.M. record card
1334	I	Torksey	Lincs	MD	Cu-alloy	100%	35.3	9.2	PP	S.M. record card
1335	I	Shalbourne	Wilts	MD	Cu-alloy	100%	34.4	9.1	D.M. Collections 1990.5	
1336	J1	Wing	Bucks	ARCH	Cu-alloy	65%, back-plate missing	37.6	9.4	N.C.C.A.S. sf 1	
1337	J1	Canterbury, Marlowe III	Kent	ARCH	Cu-alloy	100%	40	10	C.M. 1980.75	Garrard 1995; 1045; fig. 455; 500
1338	J1	Goltho	Lincs	ARCH	Cu-alloy	100%	64.5	6.2	?	Goodall 1987b, fig. 153, no. 6
1339	J1	Bawsey	Norfolk	MD	Cu-alloy	100%	43	8	PP	Norfolk SMR no. 21078 4.29
1340	J1	Congham	Norfolk	MD	Cu-alloy	100%	48.5	9	PP	Norfolk SMR no. 11743
1341	J1	Harling	Norfolk	ARCH	Cu-alloy	95%	38.5	9.1	N.C.M. 51.989/45	Margeson 1995, 60, no. 74, fig. 41
1342	J1	Surlingham	Norfolk	MD	Cu-alloy	100%	32.5	10.5	PP	Norfolk SMR no. 31655
1343	J1	Beeston Tor	Staffs	H	Cu-alloy	100%	27	9.4	B.M. 1925; 1-14; 3	Wilson 1964a, cat. no. 4, pl. XI
1344	J1	Ixworth	Suffolk	MD	Cu-alloy	100%	34	7.5	PP	Suffolk SMR no. IXW 005
1345	J2	Hamwic	Hants	ARCH	Cu-alloy	75%, terminal missing	23.1	4.6	S.C.H.	Hinton 1996a, 44, 24/21, fig. 17
1346	J2	Hamwic	Hants	ARCH	Cu-alloy	95%	11.9	8.1	S.C.H.	Hinton 1996a, 44, 24/809, fig. 17
1347	J2	Hamwic	Hants	ARCH	Cu-alloy	95%	25.2	9.5	S.C.H.	Hinton 1996a, 44, 36/94, fig. 17
1348	J2	Newbald, South	Humb, N	MD	Cu-alloy	100%	18.3	8.3	PP	Info. c/o Kevin Leahy, S.M.
1349	J2	Thwing	Humb, N	ARCH	Cu-alloy	95%	22	5.1	PP	Info. c/o Terry Manby

1350	J2	Flixborough	Humb, S	ARCH	Cu-alloy	95%	21.6	9.2	H.F.A. sf 50010	Thomas forthcoming
1351	J2	Flixborough	Humb, S	ARCH	Cu-alloy	95%	22.4	19.2	H.F.A. sf 11932	Thomas forthcoming
1352	J2	Flixborough	Humb, S	ARCH	Cu-alloy	95%	19.4	14	H.F.A. sf 11973	Thomas forthcoming
1353	J2	Flixborough	Humb, S	ARCH	Cu-alloy	100%	11.7	10.3	H.F.A. sf 12200	Thomas forthcoming
1354	J2	Flixborough	Humb, S	ARCH	Cu-alloy	100%	32.3	12.1	H.F.A. sf 4167	Thomas forthcoming
1355	J2	Flixborough	Humb, S	ARCH	Cu-alloy, Fe rivets	100%, corroded	19.6	14.8	H.F.A. sf 13704	Thomas forthcoming
1356	J2	Flixborough	Humb, S	ARCH	Cu-alloy	100%	31.1	15.1	H.F.A. sf 552	Thomas forthcoming
1357	J2	Flixborough	Humb, S	ARCH	Cu-alloy	20%, split-end fragment	16	11.3	H.F.A. sf 241	Thomas forthcoming
1358	J2	Flixborough	Humb, S	ARCH	Cu-alloy	95%	14.5	7.9	H.F.A. sf 13189	Thomas forthcoming
1359	J2	Canterbury, Mintyard	Kent	ARCH	Cu-alloy	95%	43	12	C.A.T. sf 1979, 267 282	
1360	J2	Louth	Lincs	MD	Cu-alloy	95%	23.3	8.9	S.M. not accessioned	
1361	J2	Elmham, North	Norfolk	ARCH	Cu-alloy	95%	35.6	12.4	?	Goodall 1980, 503, no. 15, fig. 263
1362	J2	Harling	Norfolk	ARCH	Cu-alloy	100%	18.2	7	N.C.M. not accessioned	Margeson 1995, 67, no. 104, fig. 47
1363	K	Shenley Brook End	Bucks	MD	Cu alloy, glass eye inlays	50%, lower fragment	30	14.5	A.Y.B.C M. 1991.58.1	
1364	K	Harling	Norfolk	ARCH	Cu-alloy	100%	28	11	N.C.M. not accessioned	Margeson 1995, 60, no. 71, fig. 41
1365	K	York	Yorks, N	OLD	Cu-alloy, niello inlay	100%	45	16.5	B.M. 79; 12-9; 2090.	Wilson & Blunt 1961, 121; Wilson 1964a, cat. no. 135, pl. XLII

1366 *2	L	Trewhiddle	Cornwall	H	Ag	90-100%, split-end on one of pair damaged	25-6	15	B.M. 80; 4-10, 15 & 16	Wilson & Blunt 1961, 84-5, pl. XXVI; Wilson 1964, cat. nos 99-100, pl. XXXVII; Webster & Backhouse 1991, cat. no. 246i
		Description: Plain matching tongue-shaped strap-ends with notched attachment ends, single rivet holes and bilaterally-faceted upper surfaces.								
1367	L	Worgret, Arne	Dorset	MD	Cu-alloy	90%, attachment end damaged	44	18.6	PP	Keen 1984, fig. 8
		Description: Openwork plate in the form of wings, with incised detail on front surface and a pair of rivet holes through each wing. The base of the plate extends into a moulded head seen from above with small ears, transverse grooves across brow, and shaped nostrils.								
1368	L	Canterbury, Mintyard	Kent	ARCH	Cu-alloy	95%	41	11	C.M. 1979.267	
		Description: Bayleaf-shaped strap-end with slightly concave edges, secured by two cu-alloy rivets. Front surface decorated with a central double contoured chevron and median ridge which joins up with the apex of the terminal. The form suggests an 8th-century date, as discussed in Chapter 6.								
1369	L	Brandon	Suffolk	ARCH	Cu-alloy	95%	73.3	12.9	S.C.C.A.S. sf BRD 018.7373	Webster in Webster & Backhouse 1991, cat. no. 66n
		Description: Elongate strap-end with wedge-shaped split-end and gently scalloped tongue. The split-end is pierced with a single rivet hole and decorated with a crude palmette formed from two incised V's. The front of the tongue is decorated with a simple double-knot interlace motif suggesting an 8th-century date.								
1370	L	Ipswich	Suffolk	ARCH	Cu-alloy	90%, damaged split-end	39.5	13.4	S.C.C.A.S. sf IAS 4801.282	Thomas forthcoming
		Description: Plain bayleaf-shaped strap-end pierced at the damaged split-end with a single rivet hole. Form suggests an 8th-century date, as discussed in Chapter 6.								
1371	L	Jarrow	T & W	ARCH	Cu-alloy	100%	38	13	? JA 71 LU	Info. c/o Rosemary Cramp
		Description: Bayleaf-shaped strap-end formed from two sheets of metal secured by a pair of rivets. The front-plate is scalloped at its upper edge keeled for two-thirds of its length upto the terminal. Form suggests an 8th-century date, as discussed in Chapter 6								
1372	L	Edington	Wilts	MD	Cu-alloy, enamel inlay	95%	26	8.5	D.M. Collections, 1983.130.2	
		Description: Small hourglass-shaped strap-end secured with a pair of rivets (L.H. missing). The rounded terminal is decorated with two pairs of small incisions inlaid with enamel.								

1373	L	Seaton	Yorks, N	MD	Cu-alloy	70%, split-end missing	37.5	16.9	Hull Museum 1993.226	
		Description: Bayleaf-shaped strap-end with engraved decoration on the front surface consisting of tightly woven 2-strand interlace. Form suggests an 8th-century date, as discussed in Chapter 6								
1374	L	York, 16-22 Coppergate	Yorks, N	ARCH	Fe, tinned	100%	35.2	11.5	Y.A.T. 1980.7 IV, sf 10884	Ottaway 1992, 690-1, no. 3793, fig. 298
		Description: Sub-rectangular strap-end with a shaft of D-section and expended terminal and split-end. The latter is decorated by two transverse relief borders, top and bottom and the former with chevrons which adjoin at their apex. The surface is tinned								
1375	L	York, 16 22 Coppergate	Yorks, N	ARCH	Fe, tinned	40%, upper fragment	29.7	17.1	Y.A.T. 1979.7 I, sf 7077	Ottaway 1992, 690-1, no. 3792, fig. 298
		Description: Folded strap-end with a narrowing waist which marks the junction between the expanded attachment end and fragmentary tongue. The upper edge of the front-plate is decorated with five V-shaped notches and the surface of the tongue with a simple pattern of grooves. The surface is tinned.								
1376	L	York, 16-22 Coppergate	Yorks, N	ARCH	Fe, tinned	75%, split-end damaged	41.3	12.5	Y.A.T. 1980.7.I, sf 9730	Ottaway 1992, 690-1, no. 3790, fig. 298
		Description: Welded strap end with tapering shaft and split-end decorated with three columns of small, sub-circular punch-marks. The squared-off terminal is divided in two by a transverse moulding. The surface is tinned.								
1377	L	York, 16 22 Coppergate	Yorks, N	ARCH	Fe, tinned	85%, split-end damaged	45	16	Y.A.T. 1981.7.II, sf 12907	Ottaway 1992, 690-1, no. 3791, fig. 298
		Description: Welded strap-end with a tapering shaft and split-end decorated with three columns of sub-circular punch-marks and with notches cut into the upper edge. The rounded terminal is divided into two zones by a plain transverse moulding. The surface is tinned.								
1378	L	York, 5 Rougier street	Yorks, N	ARCH	Bone, enamel eye inlays	85%, damaged edges	62.8	19.2	Y.M. 1981.12, sf 63	Moulden et. al. 1999, no. 85, fig. 82b
		Description: Carved bone strap end with a split-end pierced by a pair of rivet holes and an additional six pairs of iron rivets at intervals along both the edges of the plate. The front of the strap-end is decorated with five transverse fields of decoration separated by plain borders. The decorated fields consist of alternating running step, and touching circle patterns. The terminal is in the form of an animal head seen from above with a large double contoured triangle on the brow and nose and drilled eyes inlaid with discoloured enamel.								

1379	L	York, Wellington Row	Yorks, N	ARCH	Cu-alloy	100%	33.2	10.2	Y.A.T. 1988.24; context 5675, sf 7026	Moulden et. al. 1999, no. 95, fig. 88, k
		Description: Plain, waisted strap-end with wedge-shaped split-end pierced by a central attachment slot and stylised zoomorphic terminal.								

APPENDIX 2: A CHECKLIST OF LATE SAXON STRAP-ENDS DISOVERED OUTSIDE THE SURVEY AREA*

Class	Find Place	Country	Find Type	Material	Preservation	L mm	W mm	Location	Publication/Source
A1axii	Hedeby, Schleswig Holstein	Germany	OLD	Cu-alloy	90%, split-end damaged	40	12	Schleswig; Schleswig-Holsteinisches Landesmuseum	Wilson & Blunt 1961, 122; Wilson 1964a, 104; Wamers 1986, cat. no. 170, fig. 29
A2h	Pavia	Italy	OLD	Cu-alloy	95%	-	-		Info. c/o James Graham-Campbell
A1bii	Kroken, Fjaere, Aust-Agdar	Norway	OLD	Cu-alloy, Au inlay	45%, lower fragment	28	13	Oslo; Universitetets Oldsaksamling	Shetelig 1940, 179, fig. 144; Wilson & Blunt 1961, 122; Wilson 1964a, 106; Wamers 1986, cat. no. 112, fig. 29
A1axiv	Østebø, Vikedal, Rogaland	Norway	OLD	Cu-alloy	80%, split-end missing	31	10	Stavanger Museum	Shetelig 1940, 182, fig. 147; Wilson & Blunt 1961, 122; Wilson 1964a, 110; Wamers 1986, cat. no. 79, fig. 29
-	Snotra, Årfjørden, Sør. Trøndelag	Norway	-	-	-	-	-	Trondheim Museum	Wilson 1964a, 112
A1axi	Dublin	Republic of Ireland	EX	Cu-alloy	90%, split-end damaged	-	-	National Museum of Ireland, Dublin	Info. c/o James Graham-Campbell
A1a	Rjar Gorodišče	Russia	OLD	Cu-alloy	95%	31	12		Info c/o Ingmar Jansson via James Graham-Campbell
E1ai	Åspinge, Skåne	Sweden	OLD	Cu-alloy	100%	35	22	Stockholm; Statens Historiska Museum	Wilson 1964a, 106, Wamers 1986, cat. no. 152, fig. 29
A1a	Birka, Uppland	Sweden	OLD	Cu-alloy	95%	29	9		Info. c/o Ingmar Jansson via James Graham-Campbell

* See Chapter 2 for the geographical limits of the survey area

APPENDIX 3: EXCAVATED LATE SAXON STRAP-ENDS AND THEIR ARCHAEOLOGICAL CONTEXTS

Guidlines for using Appendix 3:

General: for the reasons set out in Chapter 6, more detailed contextual information on strap-ends discovered on archaeological excavations is often lacking. In the main, the absence of stratigraphic and other site information in the following is due to the result of either poor levels of recording, often with older excavations, or the lack of post-excavation analysis and publication associated with more recent archaeological projects. For purposes of reference and consistency such strap-ends are included in the appendix, though strap-ends associated with excavations prior to the 1930s and thus listed as 'Old/Arch' in the Find type field in Appendix 1 are not.

Cat no. : as for Appendix 1

Class: as for Appendix 1

Site: location of archaeological excavation

Sf no.: small find number of strap-end. Published strap-ends not provided with a sf number are referred to by their relevant catalogue entry and figure number as they appear in the excavation report.

Context no.: number of the archeological context with which the strap-end is associated

Context description: wherever possible, this field provides details on the type of archaeological context, i.e. layer, pit etc.

Associated finds: wherever possible, this field provides information on other datable finds derived from the same archaeological context.

Context date: provides a date or date period ascribed to the archaeological context. Depending upon the individual context this may be based upon a combination of dating methods, ranging from scientific techniques such as radiocarbon dating and dendrochronology, through artefact based methods such as pottery seriation and artefact typology and finally historical and documentary research. Readers are referred to individual site reports for the explanation of dating methodology and site chronology used in each case. In relevant cases, this field also records strap-ends that are clearly residual or else intrusive in regards to the date of their associated contexts.

Source: provides a general reference for the site report in which the strap-end is published. More specific references giving page numbers are usually reserved for

publications which include details of dating within the finds catalogue as such information is usually discussed widely within each report. For unpublished strap-ends, the archaeological body or institution which provided the relevant information is given (see abbreviations).

Cat. No.	Class	Site	Sf no.	Context no.	Context Description	Associated Finds	Context Dating	Source
16	A	Repton, Derbs	65	U/S, Trench 1				Info. c/o Martin Biddle
17	A	Repton, Derbs	4378	1242, Trench 4				Info. c/o Martin Biddle
20	A	Whithorn, Dumfries & Galloway	BZ19/3	303	Rubbish deposit	Coins	Coins provide a terminus of c. 840	Nicholson & Hill 1997
27	A	Hamwic, Eastern group, site SOU 11	3	F66	Pit	Secondary series, BMC Type 49 sceatta (Andrews 1988, cat no. 54)	Late 8th-century or later infill	Morton 1992, 105-17
48	A	Thwing, North Humberside	AM 15	T87, 07/F8 FAP [142] Layer 1	Dumped midden deposit in pit	Early 10th-century pottery	10th century. Residual	Info. c/o Terry Manby
50	A	Flixborough, South Humbrerside	3444	U/S				Info. c/o Chris Loveluck, H.F.A.
51	A	Flixborough, South Humbrerside	4600	3107	Ditch Fill		Phase 2-5a, 7th-9th Century	Info. c/o Chris Loveluck, H.F.A.
52	A	Flixborough,	3828	U/S				Info. c o Chris Loveluck, H.F.A.
55	A	Canterbury, Christchurch College,	38	97			9th-10th century	Info. c/o C.A.T.
56	A	Canterbury, Christchurch College,	45	2029			Late Saxon	Info. c/o C.A.T.
57	A	Canterbury, Christchurch College	207	2186				Info. c/o C.A.T.
58	A	Canterbury, Marlowe II	354					Info. c/o C.A.T.
110	A	Yarnton, Oxon	963	U/S				Info. c/o O.A.U.
111	A (manu)	Cheddar, Somerset	C. A. 30	EH/B	Disturbed destruction layer of post medieval structures		Undated	Rahtz 1979, 158-87
112	A	Cheddar, Somerset	C. A. 49	CH 76E	Occupation layer	Various	Period 2-3, c.930-11th century. Residual	Rahtz 1979, 193-218

113	A	Cheddar, Somerset	C. A. 95	U/S				Rahtz 1979, 284
115	A	Brandon, Suffolk	8691	1				Info. c/o S.C.C.A.S.
116	A	Brandon, Suffolk	2320	1				Info. c/o S.C.C.A.S.
117	A	Brandon, Suffolk	2325	U/S				Info. c/o S.C.C.A.S.
119	A	Ipswich, St Stephen's Lane, site 3104	442	281			Late Medieval. Residual	Info. c/o S.C.C.A.S.
120	A	Ipswich, Smart Street/Foundation Street, site 5701	26	234			Mid Late-Saxon, 10th century	Info. c/o S.C.C.A.S.
121	A	Ipswich, St Helen's Street, site 8804	9	-			Late Medieval. Residual	Info. c/o S.C.C.A.S.
122	A	Ipswich, Buttermarket, site 3201	17	81			Early Medieval 11/12th century. Residual	Info. c/o S.C.C.A.S.
123	A	Ipswich, Buttermarket, site 3201	18	67			Early Medieval 11/12th century. Residual	Info. c/o S.C.C.A.S.
128	A	Jarrow, JA 73, T &W	UZ 412	2018	layer	Coins of c. 844	Terminus of c.844 for deposition of layer	Info. c/o Rosemary Cramp
157	A	Whitby, North Yorks	Cat no. 127	U/S			c.657-867	Peers & Radford 1943
158	A	Whitby, North Yorks	Cat no. 128	U/S			c.657 867	Peers & Radford 1943
159	A	Whitby, North Yorks	Cat no. 129	U/S			c.657-867	Peers & Radford 1943
185	A1a	Wraysbury, Berks		T17/3/3B				Info. c o Windsor & Wraysbury Arch. Soc.
187	A1a	Walton, Bucks	A.73	U S				Evison 1976a
194	A1a	Gloucester, Upton Lane	1	U S				Info. c o G.C.M.
196	A1a	Bedhampton, Hants	Pl. XVI, B		Fill of one of the graves from a 9th-century cemetery			Webster & Cherry 1975, 222
198	A1a	Hamwic, Clifford Street, site SOU 32	455	U/S				Morton 1992, 171-182

223	A1a	North Elmham, Norfolk	Fig. 262. 3	U/S				
226	A1a	Abingdon, Vineyard, Oxon	155	1132/1				Info. c/o O.A.U.
233	A1a	Wharram Percy, North Yorks	13811	Area 6			Period VI, mid 15th-early 16th century. Residual	Hurst 1979
234	A1a	York, 21-3 Aldwark			Pit sealed beneath 10th-century church cutting mosaic-floored Romano-British building.	Grass-tempered pottery, cu-alloy pins, several coins including issues of Eadberht (c. 737-58), Eanred (c.810-40), Aethelred II (c.840-8) and Burgred of Mercia (852-74).	Latest coin gives a terminus of c. 874	Moulden et. al. 1999, no. 78, 253-254
236	A1ai	Keynsham, Avon	No.1, fig. 8		Drain		Residual in 13th-century drain in SE of Abbey site	Lowe 1987
242	A1ai	Whitby, North Yorks	Cat no. 114	U/S				Peers & Radford 1943
246	A1aii	Flixborough, South Humberside	100	1	U/S, Topsoil			Info. c/o Chris Loveluck, H.F.A.
247	A1aii	Canterbury, Christchurch College	204				9th century	Info. c/o C.A.T.
250	A1aii	Harling, Norfolk	638	U/S				Rogerson 1995
256	A1aii	Whitby, North Yorks	Cat no. 116	U/S			c.657 867	Peers & Radford 1943
257	A1aii	Whitby, North Yorks	Cat no. 121	U S			c.657-867	Peers & Radford 1943
262	A1aii	Flixborough, South Humberside	3748	U/S				Info. c/o Chris Loveluck, H.F.A.
263	A1aiii	Canterbury, St Martins Hill,	354 (432)	Trench C	Pit	Thetford-ware pottery	c.825-875/900	Graham-Campbell 1987b
286	A1aiv	London, Temple	1	3				Info. c/o Lyn Blackmore, M.O.L.A.S.
288	A1aiv	Norwich, NE bailey of castle	221	2064	Layer		Period V, 1075-1600. Residual	Ayers 1985

291	Alaiv	Ipswich, Wingfield Street/Foundation Street site 4601	1	U/S				Info. c/o S.C.C.A.S.
295	Alav	Whitby, North Yorks	Cat no. 115	U/S			c.657-867	Peers & Radford 1943
299	Alavi	Harling, Norfolk	93	U/S				Rogerson 1995
310	Alavii	Whitby, North Yorks	Cat no. 120	U/S			c.657-867	Peers & Radford 1943
325	Alax	Flixborough, South Humberside	554	555; Area A	Dark soil	Numerous	Phase 6, mid 10th-11th century. Residual	Info. c o Chris Loveluck, H.F.A.
326	Alax	Flixborough, South Humberside	10785	10772; Area G	Ditch Fill	Numerous	Phase 2-5a, 7th-9th century	Info. c/o Chris Loveluck, H.F.A.
330	Alax	Whitby, North Yorks	Cat no. 117	U S			c.657-867	Peers & Radford 1943
331	Alax	Whitby, North Yorks	Cat no. 118	U/S			c.657-867	Peers & Radford 1943
333	Alaxi	Hamwic, St Mary's Group, site SOU 254	1149	3301, T5			Middle Saxon 8th-9th century	Garner 1993
334	Alaxi	Wallsend, T & W	620	Wal G3, 4				Info. c/o Arbeia Roman Fort
344	Alaxi	Whitby, North Yorks	Cat no. 122	U S			c.657-867	
345	Alaxii	Bedford, St Paul's Square	44	A2/ 13		Halfpenny of Alfred the Great (c. 871- 878) found in same excavations	Late 9th century	Info. c/o B.C.C.A.S.
353	Alaxii	Wroxeter, H & W			Backfill of robber trench of the south aisle colonnade of the baths basilica.		Strap-end provides dating. Suggested date for strap-end in report is c. 850 on comparison with finished Sevington example.	Barker et al. 1997, 194-5
354	Alaxii	Hamwic, Six Dials, site SOU 169	2169	12482	Fill of pit 12338		Mid-Late Middle Saxon, c. 750-late 9th century.	Andrews 1997
361	Alaxii	Flixborough, South Humberside	2556	U S				Info. c/o Chris Loveluck, H.F.A.
362	Alaxii	Flixborough, South Humberside	14022	U/S				Info. c o Chris Loveluck, H.F.A.

363	A1axii	Flixborough, South Humberside	10905	10772; Area G	Ditch Fill	Numerous	Phase 2-5a, 7th-9th century	Info. c/o Chris Loveluck, H.F.A.
379	A1axii	London, Bull Wharf	1438	3209	Earliest of foreshore deposits	Other 9th-century finds included a penny of Alfred, and Carolingian artefacts including nummular brooches.	Artefactual and documentary evidence suggests the site should be associated with port for an Alfredian market site.	Info. c/o Lyn Blackmore, M.O.L.A.S.
397	A1axiii	Exeter, Cathedral Close		CG 247	Robbing of the apse of 10th-century minster, during construction of new cathedral in 1133	Coin of William II c. 1089-92	Residual in secondary context	Graham-Campbell 1983
401	A1axiii	Ipswich, School Street/Foundation Street, site 4801	5	4			19th century. Residual	Info. c/o S.C.C.A.S.
402	A1axiii	Whitby, North Yorks	Cat no. 119	U S			c.657-867	Peers & Radford 1943
407	A1axiv	Lincoln, St Paul-in-the-Bail	Fig. 6.4B	SP72				Vince 1992
408	A1axiv	Harling, Norfolk	710	U/S				Rogerson 1995
412	A1axiv	Bamburgh, Northumberland			West Ward of castle		9th-century horizon	Webster in Webster & Backhouse 1991, 235
413	A1axiv	Brandon, Suffolk	8295	6699				Info. c/o S.C.C.A.S.
420	A1axv	Wraysbury, Berks		T6/2/2B				Info. c/o Windsor & Wraysbury Arch. Soc.
422	A1axv	Porchester, Hants	49	Tr 94 layer 37	Layer		Disturbed secondary context.	Cunliffe 1976
423	A1axv	Winchester, Cathedral Car Park	1064/146	Building I.i	Layer associated with Robbing of Romano-British forum		Final phase 30, c. 901-3	Biddle 1990
424	A1axv	Winchester, Brook Street	1067/2857	House XI	Stone building		Final phase 60, mid 13th century, residual	Biddle 1990
433	A1axvi	Hamwic, Clifford Street, site SOU 32	172	F307	Pit		Middle Saxon, c.700-950	Morton 1992, 171-182

444	A1axvii	Hamwic, Six Dials, site SOU 169	1270	11887	Fill of pit 11794		Mid Middle Saxon, c.750-850	Andrews 1997
454	A1axviii	Cheddar, Somerset	CA 14	WD/MD (I)	Ditch fill	Coin of Aethelwulf, c. 845 provides terminus	Period 1, Pre c. 930	Rahtz 1979, 77-87
457	A1axix	Repton, Derbs	8770	Tr.11, 156				Info. c/o Martin Biddle
473	A1axix	Ipswich, St Stephen's Lane, site 3104	1548	2520			Early Medieval 11/12th century	Info. c/o S.C.C.A.S.
475	A1axix	Trowbridge, Wilts	4356	1352	Layer		Period 5. (12th-13th century). Layer in the graveyard above the area to the east of the Period 3 (7th-11th century) settlement. Residual in deposit	Graham & Davies 1993, 83
479	A1axx	Brandon, Suffolk	2341	U/S				Info. c o S.C.C.A.S.
481	A1b	Stonea, Cambs	P1982, 6-2,144	U/S	Surface find			Webster 1996
490	A1bi	Wraysbury, Wilts		T6 1/2B				Info. c/o Windsor & Wraysbury Arch. Soc.
520	A1bi	Ipswich, Wingfield Street/Foundation Street, site 4601	84	491			Mid Late Saxon, 10th century. Residual	Info. c/o S.C.C.A.S.
528	A1bi	Wharram Percy, churchyard, North Yorks	9, fig 191		Burial/ditch fill		Either from fill of earliest burial level from the N. churchyard or from ditch fill. Residual in disturbed context.	Bell & Beresford 1987
533	A1bii	Hamwic, Six Dials, site SOU 26	181	655	Fill of pit 654		Early-Mid Middle Saxon, c. 700 850	Andrews 1997
560	A2	Flixborough, South Humberside	10435	U/S				Info. c/o Chris Loveluck, H.F.A.
561	A2	Thwing, North Humberside	AM 11	T83 L8 GD [58]	Old Plough soil			Info. c/o Terry Manby
562	A2	Thwing, North Humberside	AM 9	T81 K12 UBG [21]	Dumping layer			Info. c o Terry Manby
573	A2	Yarnton, Oxon	13	U S				Info. c/o O.A.U.
589	A2a	Thwing, North Humberside	AM 17	T82 N9 [121]	U/S			Info. c/o Terry Manby

598	A2a	Cheddar, Somerset	C. A. 10	LK I (6)	Deposit associated with Lime Kiln I		Period 6. Residual in a late 13th-17th century deposit	Rahtz 1979, 116-19
601	A2a	Ipswich, Wingfield Street/Foundation Street, site 4601	89	499			Early Medieval, 11-12th century. Residual	Info. c/o S.C.C.A.S.
605	A2a	Whitby, North Yorks	Cat no. 124	U/S			c.657-867	Peers & Radford 1943
606	A2a	Whitby, North Yorks	Cat no. 125	U/S			c.657-867	Peers & Radford 1943
607	A2a	Whitby, North Yorks	Cat no. 126	U/S			c.657-867	Peers & Radford 1943
608	A2a	York, 5 Rougier Street	94		Layer in pit cut into datable sequence of Roman-British deposits. Sealed by 11th/12th century level.	12th-century pottery, sceatta of Eadberht (c.737-58)	Pit cut into dark soil of Roman occupation. Excavation close to the site of the discovery of the Tanner Row strap-ends	Moulden & Tweddle 1986, 30-1; Moulden et al. 1999, no. 85, 262.
615	A2b	Westness, Orkney, Scotland			Viking grave	Various, the most closely datable include a pair of 9th-century Viking oval brooches and an 8th-century Irish pseudo pennanular brooch.	Second half of 9th century (Graham-Campbell & Batey 1998, 154)	Graham-Campbell & Batey 1998, 135-138
616	A2b	Westness, Orkney, Scotland			Viking grave	Various, the most closely datable include a pair of 9th-century Viking oval brooches and an 8th-century Irish pseudo pennanular brooch.	Second half of 9th century (Graham-Campbell & Batey 1998, 154)	Graham-Campbell & Batey 1998, 135-138
617	A2c	Wraysbury, Berks	T17/1 3B			Late Saxon pottery		Info. c/o Windsor & Wraysbury Arch. Soc.
635	A2d	Harling, Norfolk	68	U S				Rogerson 1995
638	A2d	Ipswich, St Stephen's Lane, site 3104	510	385			Early Late Saxon, Late 9th century. Pottery phasing	Info. c/o S.C.C.A.S.
639	A2d	Whitby, North Yorks	Cat no. 123	U S			c.657-867	Peers & Radford 1943
646	A2e	Thwing, North Humberside	AM 14	T87 05/F8 FAP [196]	Pit fill	Early 10th-century pottery	Early 10th century	Info. c o Terry Manby

647	A2e	Thwing, North Humberside	AM 12	T83 M9 UK [38]	Dumping material			Info. c/o Terry Manby
649	A2e	Flixborough, South Humberside	11933	U/S				Info. c/o Chris Loveluck, H.F.A.
650	A2e	Harling, Norfolk	68	U S				Rogerson 1995
653	A2e	Brandon, Suffolk	2532	1				Info. c/o S.C.C.A.S.
664	A2h	St Neots, Cambs	Fig. 18.8	U/S				Addyman 1973, 95
676	A2h	Flixborough, South Humberside	9768	6300, Area D, E	Dark soil occupation deposit		Phase 6, mid 10-11th century. Residual	Info. c/o Chris Loveluck, H.F.A.
677	A2h	Flixborough, South Humberside	3774	U/S				Info. c/o Chris Loveluck, H.F.A.
685	A2h	Holten-le-Clay, St Peter's church, Lincs	4	U/S	Found north of the nave			Sills 1982, 40
701	A2h	Yarnton, Oxon		U/S				Info. c/o O.A.U.
702	A2h	Brandon, Suffolk	2125	1				Info. c/o S.C.C.A.S.
703	A2h	Ipswich, Greyfriars Road, site 5203	436	463			Middle Saxon, 8th-early 9th century	Info. c/o S.C.C.A.S.
707	A2h	Ramsbury, Wilts	2	57	Layer		Period 3b. Early 9th century	Haslam 1980
713	A2h	York, 46-54 Fishergate	71	1056			Period 6z, 13-16th century. Residual	Kemp in Rogers 1993
714	A2h	York, 46-54 Fishergate	5649	4870	Fill of pit 4873		Period 3a, early 8th century. Intrusive	Kemp in Rogers 1993
717	A2i	Canterbury, Longmarket	3587	2493				Info. c/o C.A.T.
730	A3	Brandon, Suffolk	2342	U/S				Info. c/o S.C.C.A.S.
748	A4/5b	Hamwic, Six Dials, site SOU 24	834	7521	Fill of pit 7520		Mid Middle Saxon c. 750-950	Andrews 1997
749	A4/5b	Flixborough, South Humberside	7326	U/S				Info. c/o Chris Loveluck, H.F.A.
761	A4a	Horncastle, Lincs	13	Layer 2	Modern garden soil		Residual in modern-day deposit	Everson 1983, 73

773	A4d	Poundbury, Dorset	Ae 29	U/S				Cool 1987, 98, no. 13
776	A4d	Canterbury, St Gregory's Priory	1729	1277	Grave fill			Info. c/o C.A.T.
789	A5a	Hamwic, Clifford Street, site SOU 15	4	F31, 1	Latest fill of pit	8th-9th century local and imported black and grey wares (see Hodges 1981)	8th-9th century	Morton 1992
797	A5a	Thetford, site 5759, Norfolk	880	U/S	Soil south of churches			Gooodall 1993, 96
803	A5a	Brandon, Suffolk	9850	9149				Info. c/o S.C.C.A.S.
813	A5b	Repton, Derbs	7345	Tr. 8, 1333	Primary make-up layers of Viking burial mound		Building of mound gives a terminus of 873-4	Info. c/o Martin Biddle
822	A5b	Flixborough, South Humberside	1505	1269	Occupation deposit		Mid 10th century. Residual	Info. c/o Chris Loveluck, H.F.A.
823	A5b	Thwing, , North Humberside	AM 10	T82 K11/F5 UCQ [104]	Dump inside rampart bank			Info. c/o Terry Manby
840	A5b	Brandon, Suffolk	8674	U/S				Info. c/o S.C.C.A.S.
841	A5b	Brandon, Suffolk	3638	3596	Pit fill	Late 9th-10th century Thetford ware	Late 9th-10th century	Info. c/o S.C.C.A.S.
845	A5b	Ipswich, Buttermarket, site 3201	89		Pit fill	Ipswich and Thetford ware pottery	Mid-late 9th century	Info. c/o S.C.C.A.S.
875	B	Upton Nervet, Beds	1		Pit	Late Saxon pottery, ironwork, loomweight	Provides date for context	Manning 1973-4, 55-6
881	B	Whithorn, Dumfries & Galloway	BZ19/4	303	Rubbish deposit	Coins of c.840	Terminus of c.840 for deposition	Nicholson & Hill 1997, 373
886	B	Wickford, Essex	23	Area 1, F74	Deposit	A selection of Romano-British artefacts including coarse-ware pottery and a bow brooch.	Intrusive in deposit associated with Romano-British occupation.	Couchran 1979, 41-50
887	B	Hamwic, Six Dials, site SOU 169	1465	11961				Andrews 1997
888	B	Hamwic, Six Dials site SOU 30	177	3293	Fill of pit 3292		Mid Middle Saxon c. 750-850	Andrews 1997
889	B	Hamwic, Six Dials, site SOU 258	80	14925	Fill of pit 14913		Mid Middle Saxon c. 750-850	Andrews 1997

890	B	Hamwic, Clifford Street, site 32	166	F342, 2			Middle Saxon c.700-850	Morton 1992, 171-82
891	B	Hamwic, Six Dials, site SOU 169	2037	11961				Andrews 1997
893	B	Porchester, Hants	52	Trench 103, layer 11, 2197	Layer associated with dumped occupation deposit	Late Saxon Porchester ware	Late Saxon, late 9th-11th century	Cunliffe 1976
894	B	Winchester, Brook Street	1065/7283	BS, House XII	Timber building		Final Phase 38, early-mid 11th century.	Biddle 1990
895	B	Winchester, Wolvesey Palace	1068/3601	WP, East Hall	Reconstruction deposit		Final phase 252, 13th century context. Residual	Biddle 1990
896	B	Winchester, Brook Street	1062/6402	BS, Residence	Stone building		Final Phase 4, 9th century	Biddle 1990
897	B	Winchester, Cathedral Green	1070/1076	Graveyard Works			19th century. Residual	Biddle 1990
898	B	Winchester, Cathedral Car Park	1071/638	U/S				Biddle 1990
899	B	Winchester, Wolvesey Palace	1066/586	Anglo-Saxon palace, boundary ditch, upper fills	Ditch Fill		Final phase 63, 11th-12th century context. Residual	Biddle 1990
900	B	Winchester, Wolvesey Palace	1069 605	WP, East Hall	Occupation deposit		Final phase 253, 14th-mid 15th century context. Residual	Biddle 1990
910	B	Thwing, North Humberside	AM 16	T87 Q5/F1 FAK [45] Layer 1	Palisade Trench Fill	Coins of Eanred (808-840/1)	Mid 9th century.	Info. c/o Terry Manby
915	B	Canterbury, Marlowe IV	561	90	General layer			Blockley et al. 1995
916	B	Canterbury, Marlowe I	101	65	Layer associated with clearance phase		Medieval clearance of site. Residual	Blockley et al. 1995
917	B	Canterbury, St Georges Street	456	355	Pit fill		Period 3ii, c. 1080/1100-c. 1150 Residual	Blockley 1988
918	B	Canterbury, Church Lane	859	389	Pit Fill		15-16th century pit. Residual	Info. c/o C.A.T.

919	B	Canterbury, Longmarket	2229	1698				Info. c/o C.A.T.
943	B	London, Peabody Site	491	213	Dark earth	Mid-Late Saxon pins, Ipswich ware, Imported French- and Rhennish-ware pottery.	750-950	Whytehead et al. 1989, 56
944	B	London, Westminster Abbey	50	[381] 2	Earliest ground surface over natural subsoil	Late Saxon tweezers, Late Saxon Shelly-ware pottery (900-1050)	900-1050	Mills 1995
950	B	North Elmham, Norfolk	No.13		Fill of boundary trench	Late Saxon Thetford-ware pottery	Period IV, Late 9th to 10th century	Wade-Martins 1980
951	B	North Elmham, Norfolk	No.14	U/S				Wade-Martins 1980
955	B	Dorchester, Beech House Hotel, Oxon	Fig. 20, no. 19	U/S				Rowley & Brown 1981
957	B	Brandon, Suffolk	754	1				Info. c/o S.C.C.A.S.
958	B	Brandon, Suffolk	7120	7025				Info. c/o S.C.C.A.S.
967	B	Ramsbury, Wilts	6	55	Layer of gravelly soil, interpreted as natural accumulation after abandonment of iron smelting site.		Period 3b, early 9th century	Haslam 1980
971	B	York, 46-54 Fishergate	4736	4694			Period 6a. Residual in late 12th-13th century deposit	Kemp in Rogers 1993
972	B	York, Paragon Street	141	71061	Discovered in one of nineteen trial trenches which recovered evidence for limited Anglian activity.	Finds from the other trenches included fragments of bone comb and a styca of Aethelred II of Northumbria (c. 840-8).	9th century.	Moulden et. al. 1999, no. 93, 263.
974	B1	Hinxton Hall, Cambs	13	2063	Layer in Late Saxon latrine/cess pit [2021]	Pottery, loom weight, spindle whorl	Period 5, phase 1. First Late Saxon phase dated on ceramic grounds to late 9th-10th	Info. c/o C.C.C.A.S.

							centuries (c. 875-100).	
977	B1	Winchester, Cathedral precincts	1063/7283	U/S				Biddle 1990
978	B1	St Albans, Abbey Orchard, Herts						Info. c/o St Albans Museum
980	B1	Cheddar, Somerset	C.A. 90	ED/MC (I)	Ditch fill	Coin of Aethelwulf, c. 845 provides terminus	Period 1, Pre c. 930.	Rahtz 1979, 77-87
992	B3	Northampton	CU26	Y74	Construction layer	Late Saxon pottery	Phase 3/4b, c. 875 onwards	Williams et al. 1985
1005	B4a	Hurly Hawkin, Angus		Earth House fill		14th-15th century pottery	Find on excavation of an Iron-age broch and Pictish souterrain. Residual	Taylor 1982
1008	B4a	York, 46-54 Fishergate	6462	2381			Early-mid 14th century. Residual	Kemp in Rogers 1993
1009	B4a	York, St Mary's Abbey	1955.12.2			Various, dated from the Romano-British to Anglo-Scandinavian periods.		Moulden et. al. 1999, no. 58, 250
1011	B4b	York, 16-22 Coppergate	1898	C6c6/D6a7	Build-up/dump		Period 6, 12th-century. Residual	Moulden 1999, no. 83, fig. 80l (misidentified as Anglian)
1015	B4c	Birsay, Orkney	Cat no. 432	Area 2, Room 4			Middle Norse Horizon	Curle 1982
1017	B4d	Carlisle Cathedral, Cumbria	Ae 169	241	Associated with disturbed Viking grave 240		Sub-phase Iva. See (Graham-Campbell 1995b) for dating of Viking graves in the north west.	Info. c o C.A.U.
1018	B4d	Whithorn, Dumfries & Galloway	BZ19/5	303	Rubbish deposit		Period II, coins provide a terminus of c. 840	Nicholson & Hill 1997
1024	B4d	Norwich, Bishopsgate	Cat no. 227	U/S				Margeson 1993, 34
1031	B5	Ipswich, Franciscan Way, site 5003	38	858			Early Late Saxon, late 9th century	Info. c/o S.C.C.A.S.
1032	B5	York, 16-22 Coppergate	8146	21764			Period 5B, Late 10th/early 11th century. Residual	MacGregor et al. 1999, 1942
1033	B5	York, 16-22 Coppergate	5976				Period 5A, late 10th century context	Info. c/o Nicky Rogers, Y.A.T.
1034	B5	York, 16-22 Coppergate	7306	20978			Period 5A, late 10th-century context	Info. c/o Nicky Rogers, Y.A.T.

1035	B5	York, 46-54 Fishergate	3263	U/S				Kemp in Rogers 1993
1039	B6	Winchester, 49-55 Upper Brook Street	1420.1	U/S				Info. c o H.H.R.C., Winchetser
1043	B7	Rottingdean, East Sussex	Fig. 5		Upper fill of ditch sealed by south wall of nave of 12th-century church	Norman pottery	The fabric of the church provides a *terminus ante quem* for the ditch of c. 1150. Also dated by pottery	Norris & Hockins 1953
1045	C	Hamwic, Six Dials, site SOU 24	4	14802				Andrews 1997
1046	C	Hamwic, Eastern Group, site SOU 5	72	F27	Pit		Middle Saxon, c. 7th-9th century	Holdsworth 1980
1047	C	Hamwic, St Mary's Group, site SOU 33	89	F2	Disturbance layer			Morton 1992
1048	C	Hamwic, Eastern Group, site SOU 5	71	F27	Pit		Middle Saxon, c. 7th-9th century	Holdsworth 1980
1049	C1	Jarrow, T & W	JA 67	Tr. 6704/648			Pre-conquest	Info. c/o Rosemary Cramp
1050	C1	Hartlepool, Cleveland		A1258	Layer cut by Anglo-Saxon features		Mid 7th century	Daniels 1988
1051	C1	Hamwic, Clifford Street, site SOU 15	5	F44	Pit			Morton 1992
1052	C1	Hamwic, Central Group, site SOU 177	53	117 T2				
1053	C1	Hamwic, St Mary's, site SOU 44	1	U/S				Morton 1992
1054	C1	Hamwic, Clifford Street, site SOU 32	316	U/S				Morton 1992, 171-182
1055	C1	Hamwic, Six Dials, site SOU 24	17	14064	Fill of pit 14024		Early-Mid Middle Saxon, c. 700 850	Andrews 1997
1056	C1	Hamwic, Six Dials, site SOU 24	25	7475	Fill of pit 7508		Early-mid Middle Saxon, c. 700-850	Andrews 1997
1057	C1	Hamwic, Clifford Street, site SOU 32	317	U/S				Morton 1992, 171-182
1058	C1	Hamwic, Six Dials, site SOU 24	824	9422	Fill of pit 9421		c. 700-850+	Andrews 1997

1059	C1	Hamwic, Six Dials, site SOU 31	910	5622	Fill of pit 5253		Mid Middle Saxon, c.750-850	Andrews 1997
1060	C1	Hamwic, Clifford Street, site SOU 36	99	Pit 15, layer 9		Kingsland hoard of 23 sceattas (Andrews 1988)	Middle Saxon feature, c. 8th-9th centuries	Morton 1992, 195-204
1061	C1	London, Peabody site	166	213	Dark Earth	Mid-Late Saxon pins, Ipswich-ware, Imported French- and Rhennish-ware pottery.	750-950	Whytehead et al. 1989, 56
1062	C1	London, Royal Opera House	757	1350	Hearth deposit in building 38, interpreted as a smithy.	Middle-Saxon pin, shelly ware pottery	Period 5, dated to the 8th century	Info. c/o Lyn Blackmore, M.O.L.A.S.
1063	C1	London, Royal Opera House	61	1070	Alley between two buildings	Pottery assemblage includes Ipswich, shelly and chaff-tempered wares	Period 6, late 8th to early 9th century	Info. c/o Lyn Blackmore, M.O.L.A.S.
1064	C1	London, Westminster Abbey	25	344	Flood deposit	Late Saxon Shelly-ware and Early Medieval pottery.	1000-1050. Residual	Mills 1995
1065	C1	Maxey, Northants	Fig. 17, no.1	F7	Pit			Addyman 1964
1066	C1	Brandon, Suffolk	4328	4347				Info. c/o S.C.C.A.S.
1067	C2	Hamwic, Eastern Group, site SOU 20	2	F116				
1068	C2	Hamwic, Six Dials, site SOU 24	5	13963	Fill of pit 13951		Mid Middle Saxon, c.750-850	Andrews 1997
1069	C2	Hamwic, Six Dials, site SOU 31	622	5273	Fill of pit 4614		Early-Late Middle Saxon, c 650 950	Andrews 1997
1070	C2	Hamwic, Six Dials, site SOU 169	189	8733				Andrews 1997
1071	C2	Ipswich, School Street/Foundation Street, site 4801		2804			Late Medieval. Residual	Info. c/o S.C.C.A.S.
1072	D	Hamwic, Six Dials, site SOU 169	397	8568	Fill of pit 8474		Mid Middle Saxon, c. 750-850	Andrews 1997
1073	D	Flixborough, South Humberside	1524	1456	Area E, F occupation deposit		Period 6a, Mid 10th century	Info. c/o Chris Loveluck, H.F.A.

1076	D	Riby, Lincs	1105	Ditch 96	Ditch		Part of Middle Saxon enclosure system of 8th-9th-century date	Steedman et al. 1994
1081	D	Yarnton, Oxon	792	3254	Ditch		Phase 4, Late Saxon I. 10-11th century	Info. c/o O.A.U.
1106	E1	St Neots, Cambs		D4	Interface between layers 3 & 4	Decorated bone comb	Strap-end discarded during period associated with destruction of house in the 11th century	Addyman 1965, 66-67
1122	E1ai	Winchester, Cathedral Green	1057/1396	Anglo-Saxon grave 321 in Old minster	Grave fill		Final Phase 39, mid 10th century	Biddle 1990
1131	E1ai	London, St Peter's Hill	97	U/S				Vince (ed.) 1992
1140	E1aii	Chester	3	U/S				Lloyd-Morgan 1994
1142	E1aii	Winchester, Brook Street	1056 6624	Pre-House XII	Pits and occupation deposits		Final Phase 36, early-mid 10th century	Biddle 1990
1157	E1b	Winchester, Brook Street	1060/6810	House XI,	Timber building		Final phase 58, mid 11th-mid 12th century. Residual	Biddle 1990
1158	E1b	Winchester, Cathedral Green	1061/2614	Path 2			Final Phase 247-8, 14th-century. Residual	Biddle 1990
1160	E1b	Goltho, Lincs						
1171	E1b	York, 16-22 Coppergate	6833				Period 5B deposit, late 10th/early 11th century. Residual.	MacGregor et al. 1999, 1942
1172	E1b	York, 16-22 Coppergate	7501	22268			Period 4B deposit, 10th century	Roesdahl et al., 1981, 108
1185	E1c	Harling, Norfolk	628	U/S				Rogerson 1995
1199	E1c	York, 46 Lloyd's Bank	451	Tr II, F17		10th-11th century pottery	Context post dates 940 50	MacGregor 1982
1201	E2ai	Norwich, NE bailey of Castle	204	1043	Layer		Period II/IV, 11th century	Ayers 1985

1204	E2ai	York, Wellington Row	6732	7551	Deposits associated with timber building and associated horizon overlaying a dark earth deposit dated c. 360-early 5th century.	Finds from vicinity included Tating and Ipswich-ware pottery and several coins including issues spanning the reigns of Eadberht (c.737-58) to Aethelred II (c.840-8).	Late 8th/9th century. Intrusive	Moulden et. al. 1999, no. 95, 266
1216	E2bi	Ipswich, School Street/Foundation Street, site 4801	78	783			Mid Late Saxon, 10th century	Info. c/o S.C.C.A.S.
1226	E3	Carlisle, Cathedral, Cumbria	Ae 208	grave 255	Viking grave		First half of the 10th century (Graham-Campbell 1995b)	Info. c/o C.A.U.
1227	E3	Carlisle, Cathedral, Cumbria	Ae 221	grave 255	Viking grave		First half of the 10th century (Graham-Campbell 1995b)	Info. c/o C.A.U.
1228	E3	Carlisle, Cathedral, Cumbria	Ae 133		Disturbed Viking grave		First half of the 10th century (Graham-Campbell 1995b)	Info. c/o C.A.U.
1229	E3	Carlisle, Cathedral, Cumbria	Ae 183		Disturbed Viking grave		First half of the 10th century (Graham-Campbell 1995b)	Info. c/o C.A.U.
1233	E3	Peel Castle, Isle of Man	OL	Grave IV; 85.60L 1155	Viking grave	Buckle, ringed-pin, iron awl, composite comb	First half of the 10th century (Graham-Campbell 1995b)	Freke forthcoming
1248	E4b	Workington, St Michael's church, Cumbria		1051	Viking grave		First half of the 10th century (Graham-Campbell 1995b)	Info. c/o C.A.U.
1253	E4b	York, St Mary Bishopshill Senior			Disturbed destruction level		4th-century Romano-British context. Excavation not far from the site of an Anglo-Saxon church. Intrusive	Hall 1998.; Moulden et. al. no. 74, 252
1258	E5	Winchester, Cathedral Green	272	Robbing of Old Minster			Final phase 58, c. 1093-4	Biddle 1990
1262	E5	Goltho, Lincs						Info. c/o B.M.
1271	E5	Thetford, Norfolk	10 018	U/S				Dallas 1993,
1272	E5	Nottingham, Halifax Place					12th-century context. Residual	Info. c/o Nottingham Museum

1275	E6	Aspatria, Cumbria			Viking burial. Barrow excavation in 1789	Iron sword, spear, knife, spur, horse-bit, axe-head, and a gold buckle	Viking grave, late 9th/10th century (Graham-Campbell 1995b)	Edwards 1992, 43-44
1279	E6	Balladoole, Isle of Man	Cat no. 24		Viking grave		First half of 10th century (Graham-Campbell 1995b)	Bersu & Wilson 1966
1280	E6	Balladoole, Isle of Man	Cat nos. 21 & 22		Viking grave		First half of 10th century (Graham-Campbell 1995b)	Bersu & Wilson 1966
1285	E6	London, Bull Wharf	198	U/S				Info. c/o Lyn Blackmore, M.O.L.A.S.
1295	E6	York, 16-22 Coppergate	11100				Period 4b deposit, 10th century	Info. c/o Nicky Rogers, Y.A.T.
1302	F1	Cronk Moar, Jurby, Isle of Man	Cat no. 3		Viking grave		First half of the 10th century (Graham-Campbell 1995b)	Bersu & Wilson 1966
1306	F1	Udal, North Uist		Level X			9th-11th century	Graham-Campbell 1973a
1314	G	Freswick Links, Caithness, Scotland		U/S				Batey 1987
1323	G	Doncaster, South Yorks	Fig. 66, no.17	DQ/GN 39/199	Fill of medieval malting oven		Residual in medieval deposit, though near to the site of a pre-conquest ditch	Buckland et al. 1989
1325	H	Goltho, Lincs	5		layer		Period 5. Top scraping of 11th-century kitchen c. 1000-1080.	Beresford 1987, 176
1326	H	Jarlshof, Shetland					Latest Level in midden associated with Norse horizon. Dated to 10th century	Hamilton 1956
1336	J1	Wing, Bucks	1	Trench 5/context 2			Late Saxon	Info. c/o N.C.C.A.S.
1337	J1	Canterbury, Marlowe III	75	context 17, layer S29			Period 8, c. 850-1050	Blockley et al. 1995
1338	J1	Goltho, Lincs	6	East of kitchen			Period 5, c. 1000-1080	Beresford 1987
1341	J1	Harling, Norfolk	81	U/S				Rogerson 1995
1345	J2	Hamwic, Six Dials, site SOU 24	21	7766	Fill of pit 7765		Mid Middle Saxon, c. 750-850	Andrews 1997
1346	J2	Hamwic, Six Dials, site SOU 24	809	14064				Andrews 1997

1347	J2	Hamwic, Clifford Street, site SOU 36	94	293	Pit		Late Middle Saxon, c. mid 9th century	Morton 1992, 195-204
1349	J2	Thwing, North Humberside	AM 13	T83 08 AAj/4	Midden deposit in top of outer ditch	Early 10th century pottery	Early 10th century	Info. c/o Terry Manby
1350	J2	Flixborough, South Humberside	50010	U/S				Info. c/o Chris Loveluck, H.F.A.
1351	J2	Flixborough, South Humberside	11932	U/S				Info. c/o Chris Loveluck, H.F.A.
1352	J2	Flixborough, South Humberside	11937	U/S				Info. c/o Chris Loveluck, H.F.A.
1353	J2	Flixborough, South Humberside	12200	U/S				Info. c/o Chris Loveluck, H.F.A.
1354	J2	Flixborough, South Humberside	4167	3107	Ditch Fill		Phase 2-5a, 7th-9th century	Info. c/o Chris Loveluck, H.F.A.
1355	J2	Flixborough, South Humberside	13704	U/S				Info. c/o Chris Loveluck, H.F.A.
1356	J2	Flixborough, South Humberside	552	535	Dark Soil		Phase 6, mid 10th-11th century	Info. c/o Chris Loveluck, H.F.A.
1357	J2	Flixborough, South Humberside	241	223	Ditch		Period 5a, mid-late 9th Century	Info. c/o Chris Loveluck, H.F.A.
1358	J2	Flixborough, South Humberside	13198	U/S				Info. c/o Chris Loveluck, H.F.A.
1359	J2	Canterbury, Mintyard	267					Info. c/o C.A.T.
1361	J2	Elmham, North, Norfolk		1075	Ditch		Period 1, phase 2, Middle Saxon, early-mid 9th century	Wade-Martins 1980
1362	J2	Harling, Norfolk	294	U/S				Rogerson 1995
1364	K	Harling, Norfolk	524	548	Fill of Ditch 700	Thetford ware pottery	Late Saxon, c 950 1150	Rogerson 1995
1368	L	Canterbury, Mintyard	392					Info. c/o C.A.T.
1369	L	Brandon, Suffolk	7373	7974				Info c/o S.C.C.A.S.
1370	L	Ipswich, School Street/Foundation Street, site 4801	283	1571			Middle Saxon, 8th-9th century	Info. c/o S.C.C.A.S.

1371	L	Jarrow, T & W	JA 71	Tr 7103, 634				Info. c/o Rosemary Cramp
1374	L	York, 16-22 Coppergate	10884	21769			Period 5B, c.975-early/mid 11th century	Hall in Ottaway 1992
1375	L	York, 16 22 Coppergate	70707	14922	Context overlying tenanment D		Period 5A, c. 975	Hall in Ottaway 1992
1376	L	York, 16-22 Coppergate	9730	25808	Occupation deposite associated with tenament C		Period 4B, c. 930/5-975	Hall in Ottaway 1992
1377	L	York, 16-22 Coppergate	12907	34053			Period 4B, c. 930/5-975	Hall in Ottaway 1992
1378	L	York, 5 Rougier Street	63		Layer in pit cut into datable sequence of Roman-British deposits. Sealed by 11th/12th century level.	Fragment of decorated bone dated stylistically to the 10th or 11th century.	10/11th century. Residual	Moulden & Tweddle 1986, 30-31; Moulden et. al. 1999, 262, no. 85.
1379	L	York, Wellington Row	7026		Deposits associated with timber building and associated horizon overlaying a dark earth deposit dated c. 360-early 5th century.	Finds from vicinity included Tating and Ipswich-ware pottery and several coins including issues spanning the reigns of Eadberht (c.737-58) to Aethelred II (c.840-8).	Late 8th/9th century.	Moulden et. al. 1999, 266, no. 95

APPENDIX 4: REPORT ON THE SCIENTIFIC EXAMINATION OF A GROUP OF LATE SAXON STRAP-ENDS FROM SEVINGTON, WILTSHIRE, BY SUSAN LA NIECE OF THE DEPARTMENT OF SCIENTIFIC RESEARCH, BRITISH MUSEUM

Abstract

This hoard contains, amongst other metal artefacts, eight strap-ends, some fully finished and decorated, while others appear to be unfinished. Three are of silver, two are brass (an alloy of copper and zinc) and three are alloys of copper with zinc, tin and lead. One of each alloy type was examined metallographically to clarify how they were made. The sequence of manufacture, for this group at least, appears to be to cast a small, thick billet, cut a notch at one end to provide the opening for the strap, then work (and anneal) the strap-end to its final form, pierce two holes for the rivets, and decorate it.

The group of strap-ends investigated from the Sevington hoard consists of the following:-

Registration no.	Description	Metal type
1888-7-19,163	Fully decorated, complete with rivets	Copper with tin, lead and zinc
1888-7-19,164*	Undecorated and without rivets, but the slit for the strap and the holes for the rivets are present.	*Brass*
1888-7-19,167	As for 164 above, but broken	Brass
1888-7-19,168*	Cast billet, with broad cut at the thinner end. Broken	Copper with tin, lead and zinc
1888-7-19,166	Undecorated, with no rivet holes and no usable opening slit for a strap.	Silver
1888-7-19,165*	Undecorated, with no rivet holes, but slit for strap is present.	Silver

* Examined metallographically on a prepared section

In addition there are two broken fragments, one of silver and the other an alloy of copper with lead, tin and zinc, both of which have a slit, presumably for a leather strap.

The hoard was found at the end of the last century and, typically for the conservation treatments of that time, the finds were stripped of all corrosion down to the bare metal and lacquered. This treatment has removed any surface evidence for the method of manufacture and undoubtedly altered the alloy composition at the treated surface, hence the qualitative descriptions of the alloys (by X-ray flourescence analysis).

Metallographic examination

A full section would have caused unacceptable damage to these objects, but a taper section (flat area polished and etched directly on an edge of an object) was able to provide the following results when examined by metallographic microscope and in a scanning electron microscope (SEM):-

1888-7-19,168 - cast billet

A taper section at the tip indicates a cast structure, with little distortion from working.

1888-7-19,164 - undecorated brass strap-end with slit for strap, and rivet holes

A taper section at the side, in the zone around the split, indicates two important features. Firstly there is no evidence for continuation of the slit down the length of the strap-end: there is no cracking, discontinuity of the metal structure and no solder could be detected (see SEM micrographs 1 and 2). Secondly, the etched structure is of a copper alloy which has been recrystallised by heavy working and annealing (SEM micrograph 3).

1888-7-19,165 - undecorated silver strap-end with slit but no rivet holes

A taper section along one side likewise showed no evidence for continuation of the slit and also indicated a worked structure to the metal. At this edge there was considerable folding of the metal, presumably the result of working the strap-end to its full length while endeavoring to keep the edges straight.

Discussion and Conclusions

The strap-ends in the Sevington hoard are made of three different alloy types and appear to represent stages of manufacture form the simple cast billet (1888-7-19,168) through to a fully decorated strap-end, complete with rivets for attachment (1888-7-19,163). Several of the pieces in the hoard are broken and appear to be scrap, only fit for recycling. They probably represent a workshop assemblage, but it certainly is not a particularly high quality example of its type.

There are no metallographic studies of Saxon strap-ends known to the author, and a discussion of the manufacturing methods for this class of artefact has been limited to surface observations. MacGregor (1994, 122-27) suggested that a pair of Late Saxon silver strap-ends from Ipsden Heath, Oxfordshire, were made by folding a sheet of metal and hammering the two halves together up to the opening. In the case of the Sevington hoard, the results of the metallographic examination show no evidence for this method of manufacture for either the silver or brass strap-ends. Of course, there is no reason why the methods of working seen on the Sevington group would necessarily be applied at all workshops making strap-ends at this period.

These strap-ends were not cast to their final form: their shaping involved considerable working. Although it was not possible to examine the microstructure of the sole decorated piece without causing visible damage, the evidence that the unfinished pieces are worked, not cast, does support the view that the decoration was individually worked, not cast in its finished form. The method of making the slit in the Sevington examples appears to be to cut a notch at one end of the cast billet, perhaps with a chisel. The billet was then worked to its final shape until the notched

end was sufficiently flattened and thinned to take the strap. It is probable that a parting agent would be needed to prevent the slit closing up during working. This point could perhaps be resolved experimentally by an experienced metalworker.

Susan La Niece
Project 7045
22 December 1998

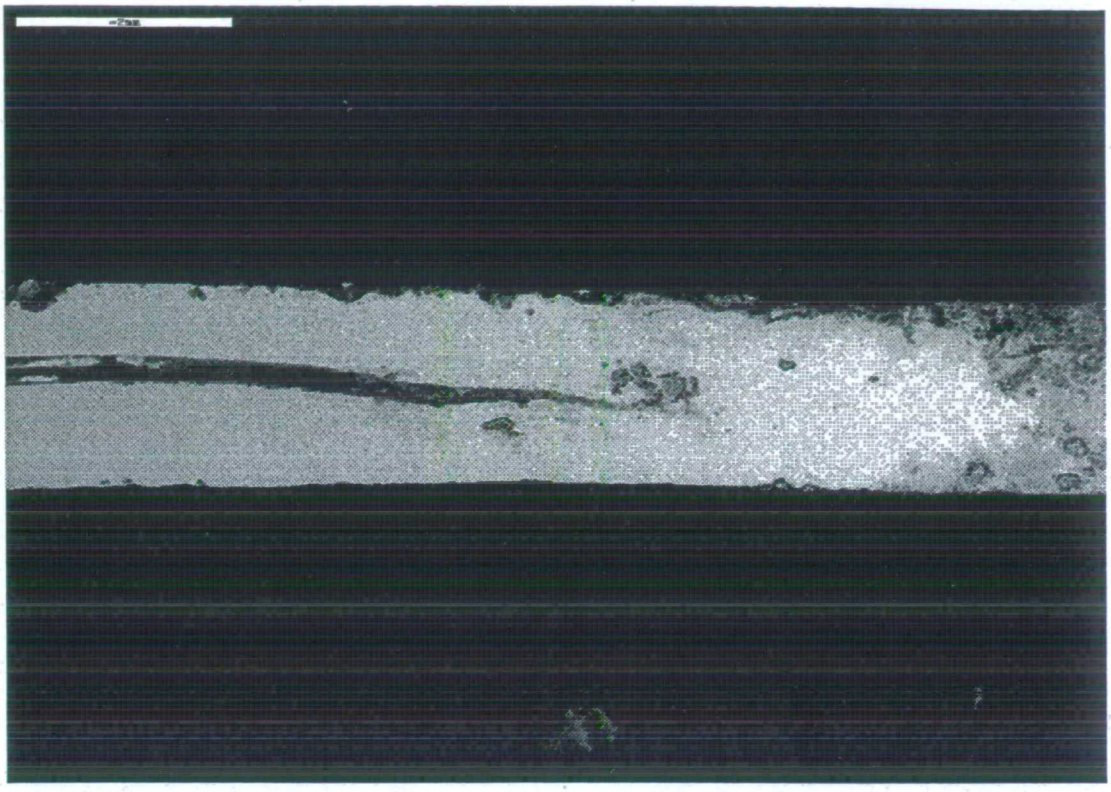


Figure 1 Side of strap-end 1888-7-17,164 showing the beginning of the slit.(Polished. SEM backscattered electron image: scale bar = 2 mm).

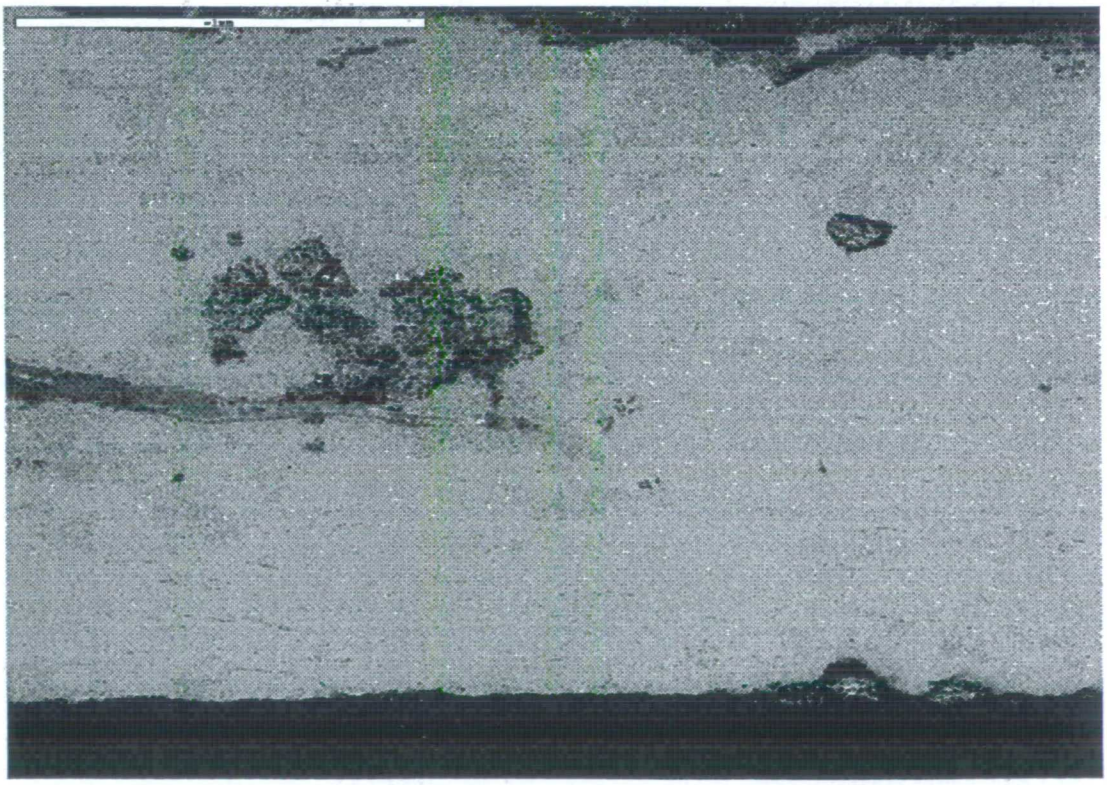


Figure 2 Detail of figure 1 (scale bar = *1* mm). Note that there is no evidence for continuation of the slit beyond this point. The dark patches are corrosion.

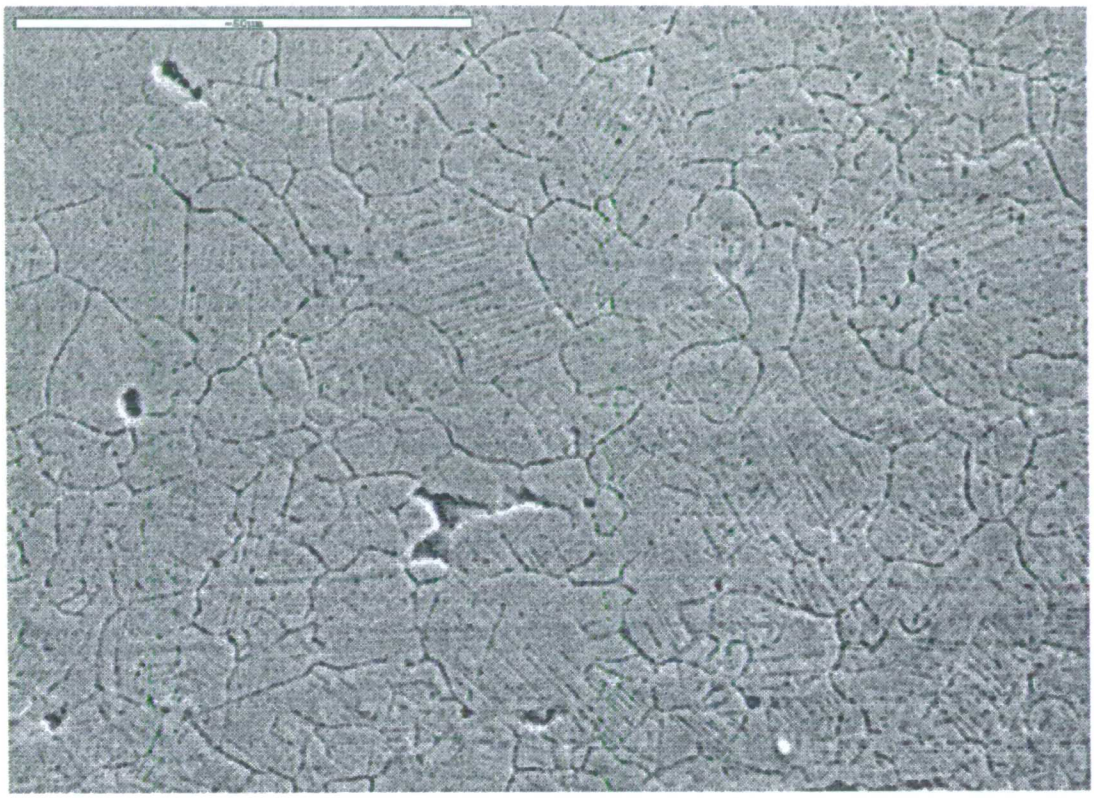


Figure 3 High magnification detail of figure 1, polished, etched with alcoholic ferric chloride, and viewed in SEM secondary image. The equiaxed grain structure, with parallel strain lines within the grains, indicate that the strap-end was worked and annealed. (Scale bar 50 μm). The cavities are caused by corrosion attack.

Diagram 3.1: Scatterplot comparing length versus width among the principle classes of strap-end

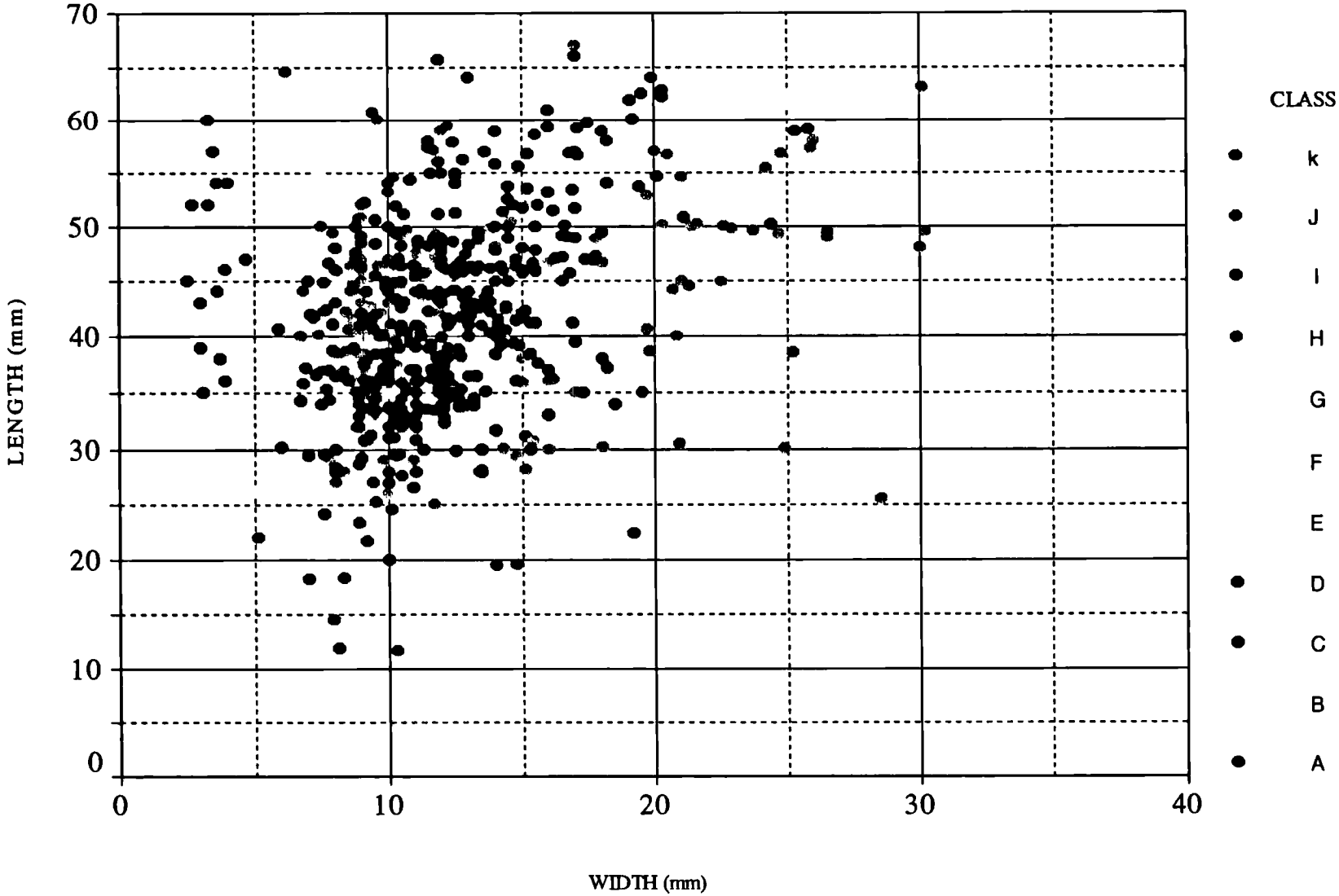
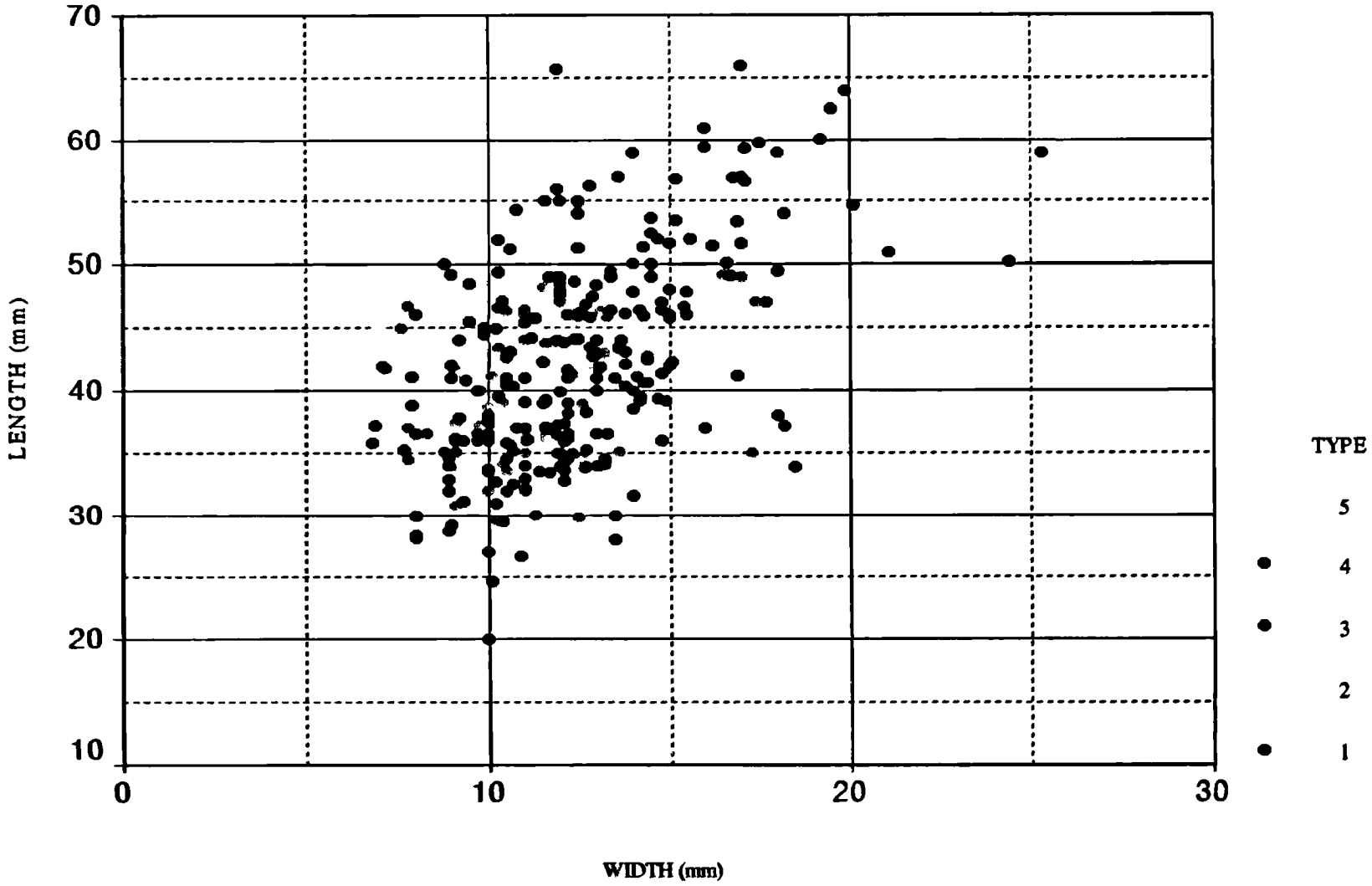


Diagram 3.2: Scatterplot comparing length versus width among the five principle Types of Class A strap-end



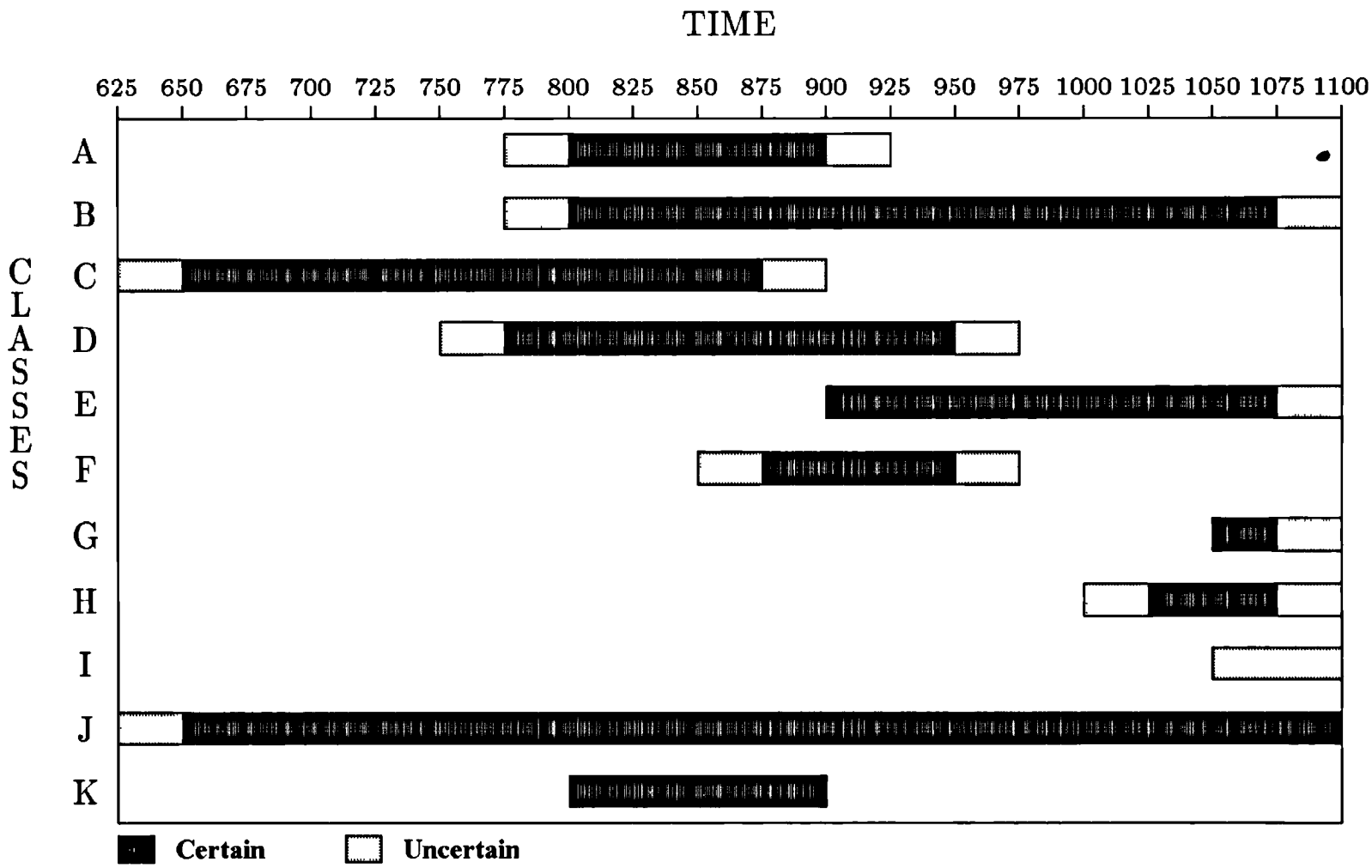
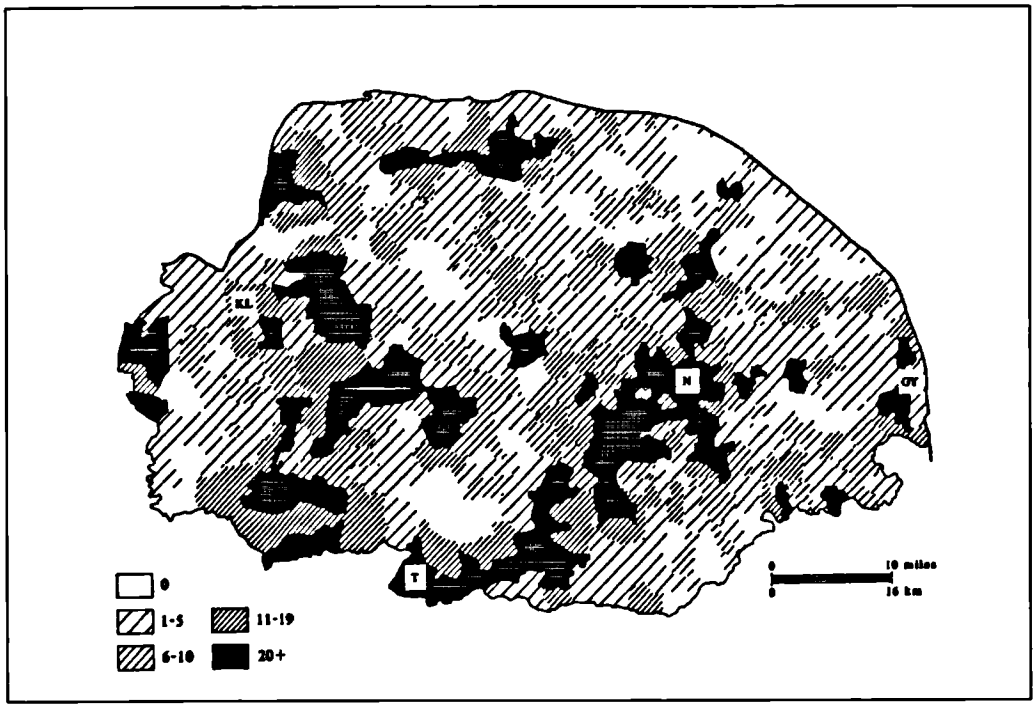
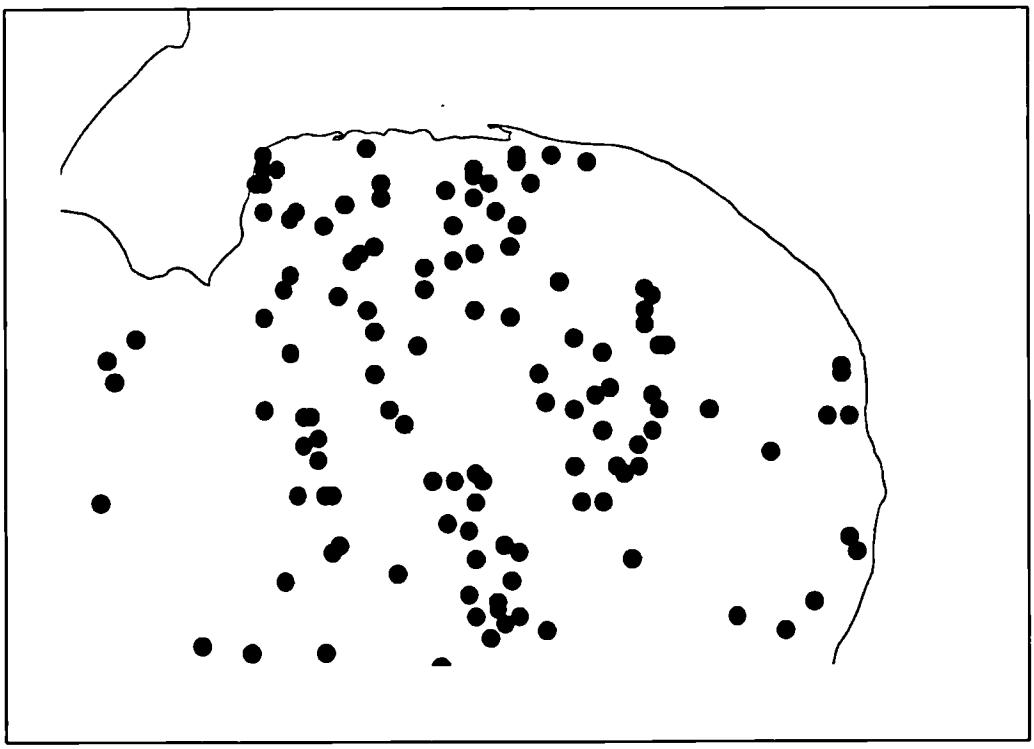


Diagram 6.1: Suggested date ranges for the principle classes of Late Saxon and Viking-age strap-end

Map 1: Comparison of the frequency of metal-detecting and the discovery of strap-ends in Norfolk

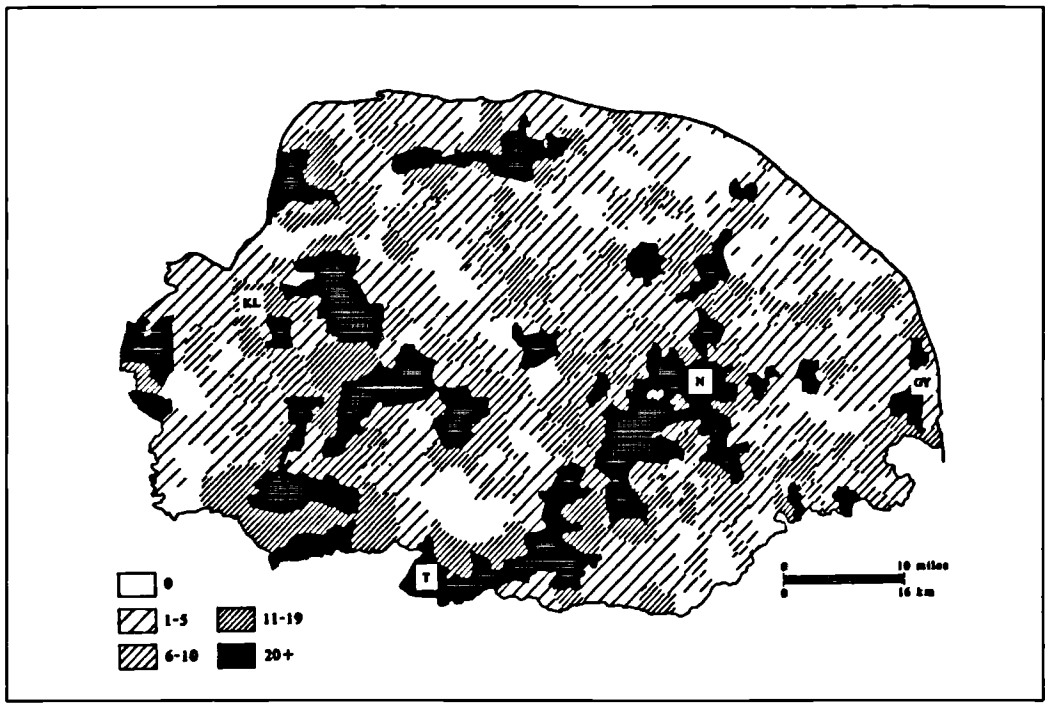


A: Metal-detecting in Norfolk: the number of recorded events by parish.
KL = Kings Lynn, T = Thetford, N = Norwich, GY = Great Yarmouth
After Gurney 1997



B: Distribution of Late Anglo-Saxon and Viking-Age strap-ends in the Norfolk region.

Map 1: Comparison of the frequency of metal-detecting and the discovery of strap-ends in Norfolk



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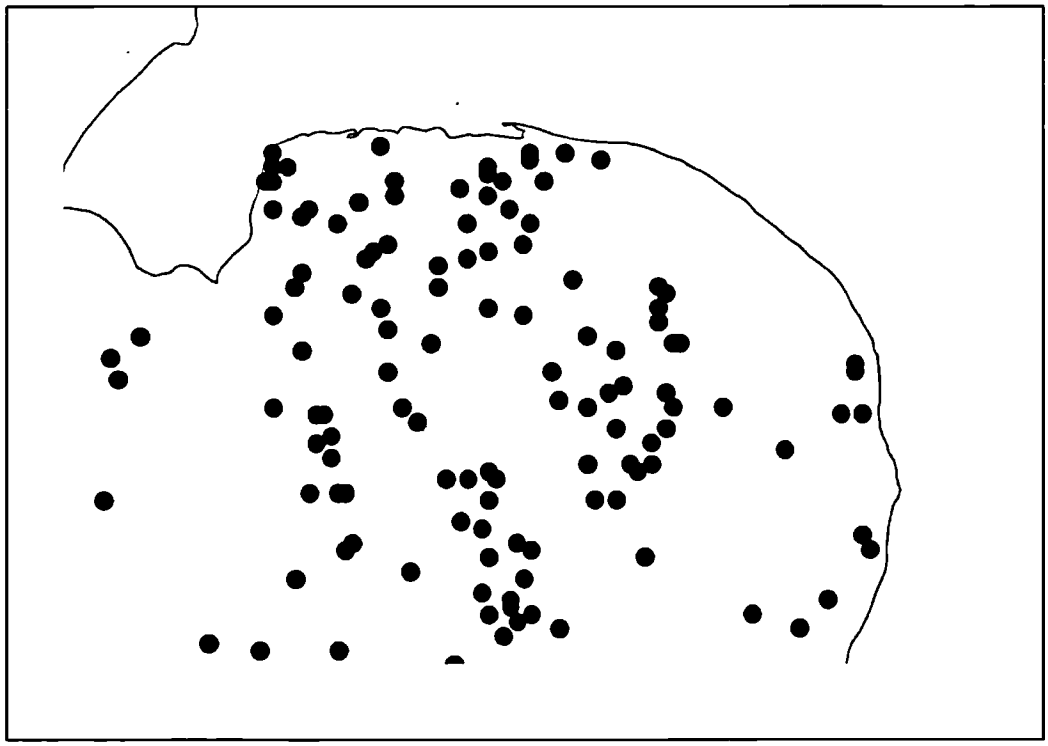
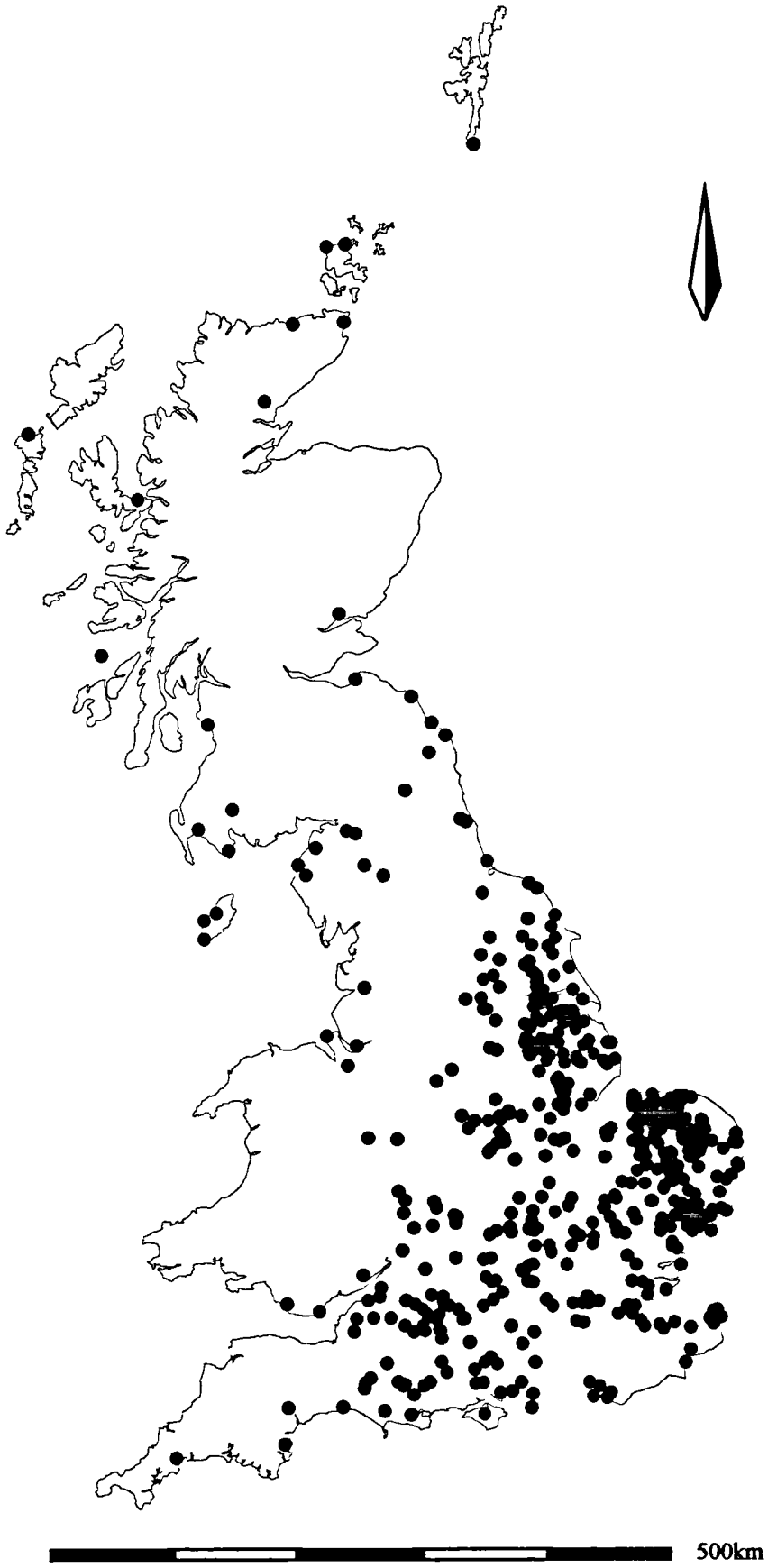
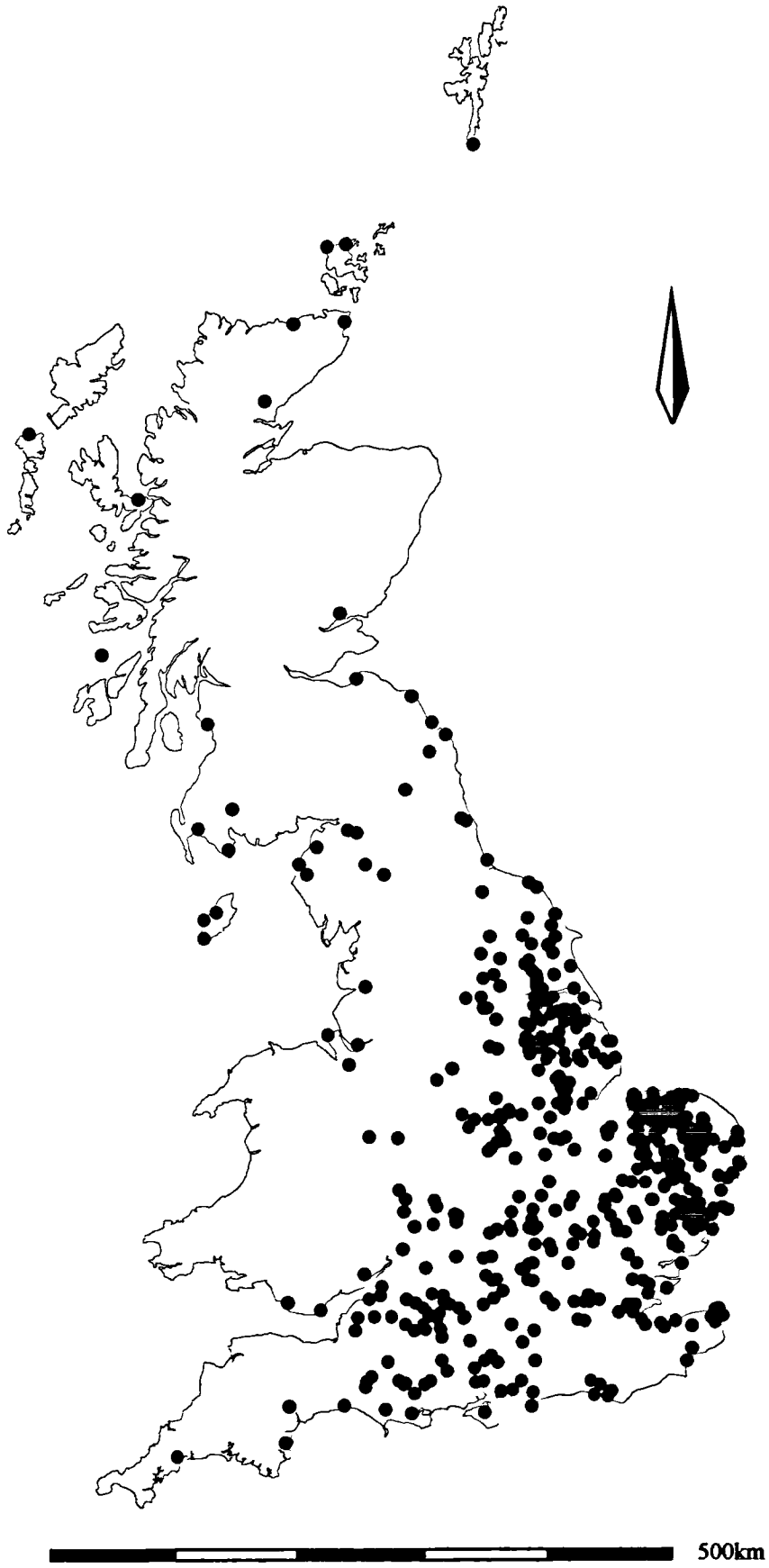


B: Distribution of Late Anglo-Saxon and Viking-Age strap-ends in the Norfolk region.

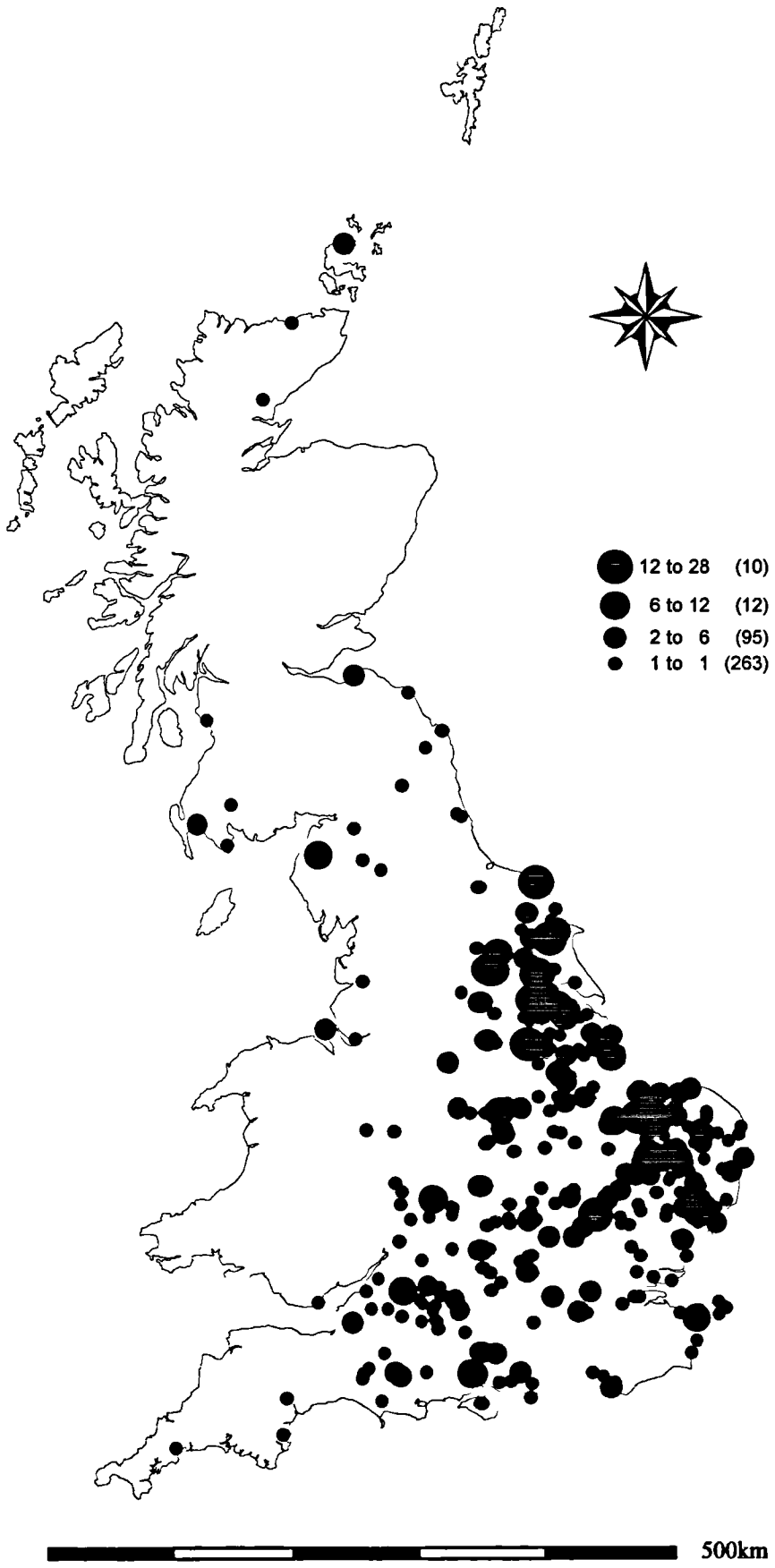
Map 2: National Distribution of Late Anglo-Saxon and Viking-Age Strap-Ends



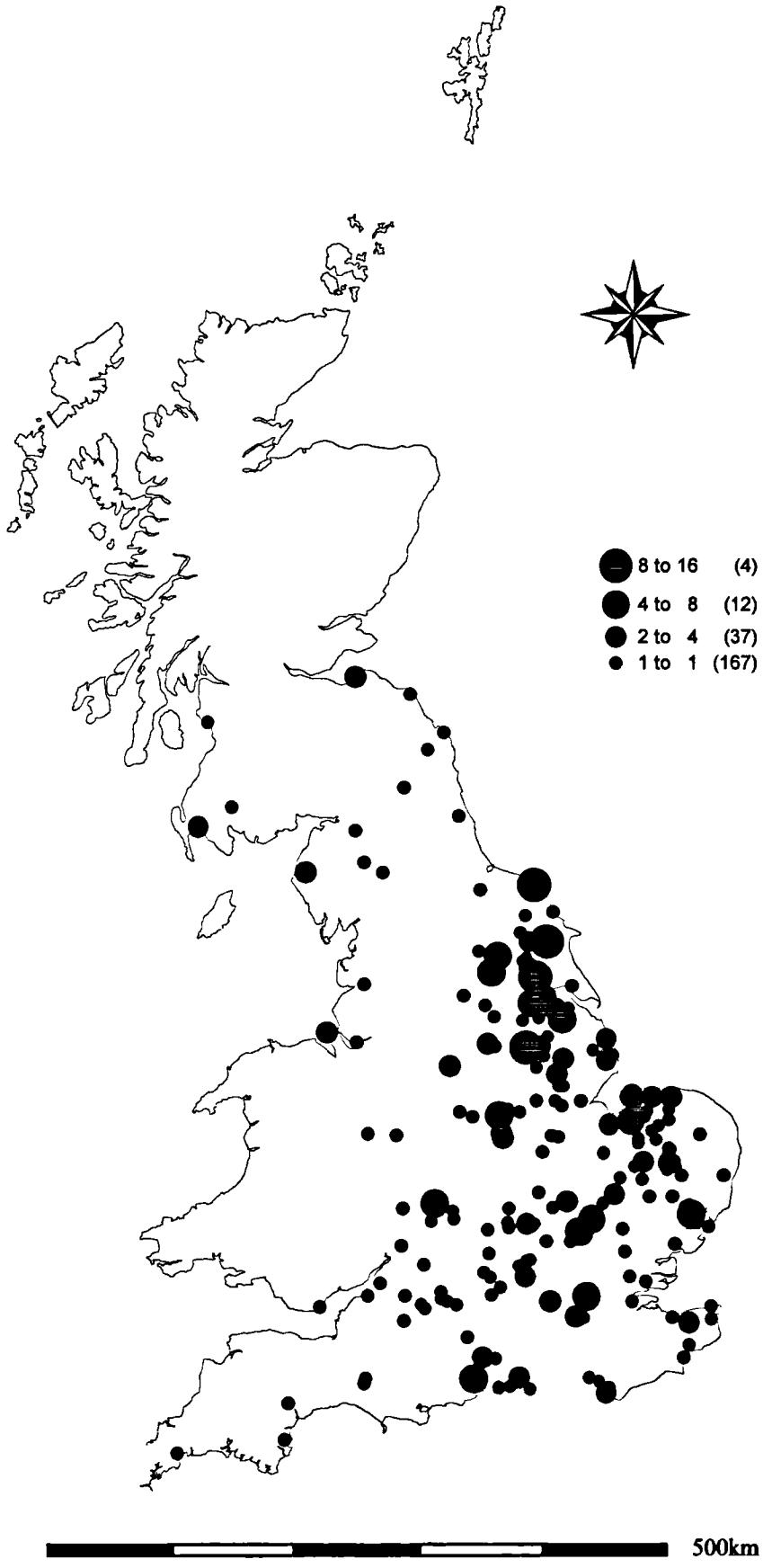
Map 2: National Distribution of Late Anglo-Saxon and Viking-Age Strap-Ends



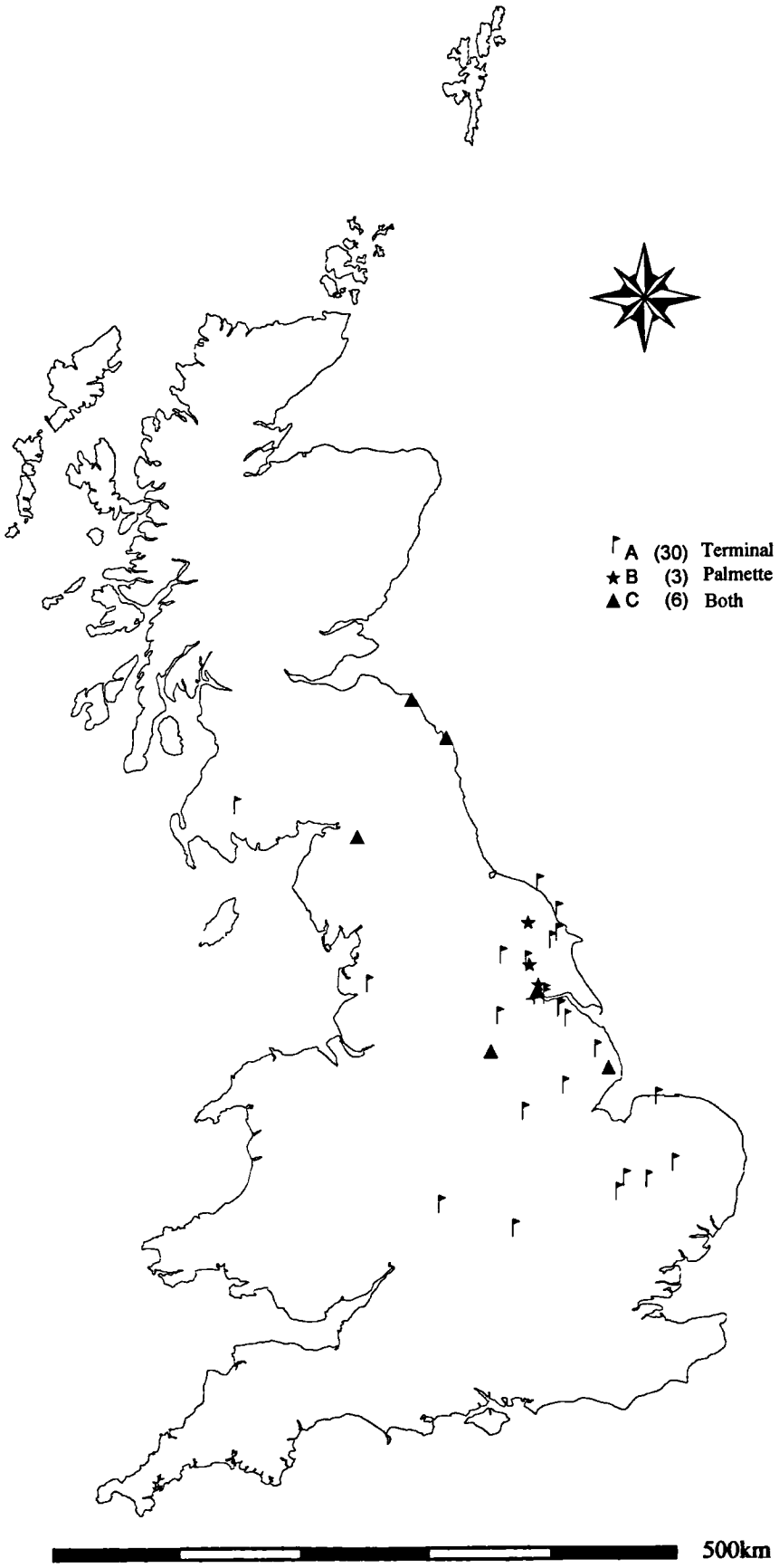
Map 3: Distribution of Class A Strap-Ends



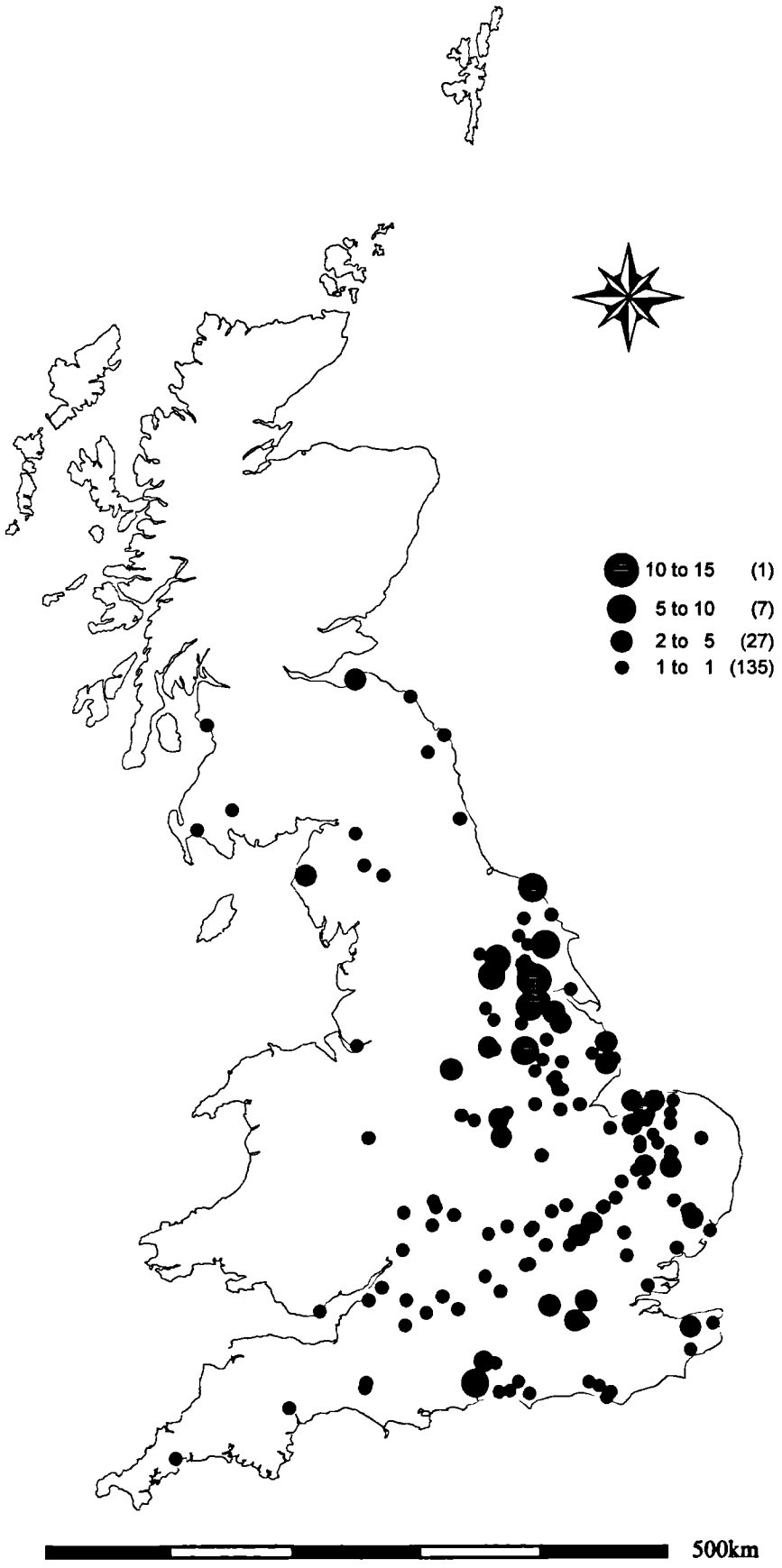
Map 4A: Distribution of Type A1 Strap-Ends



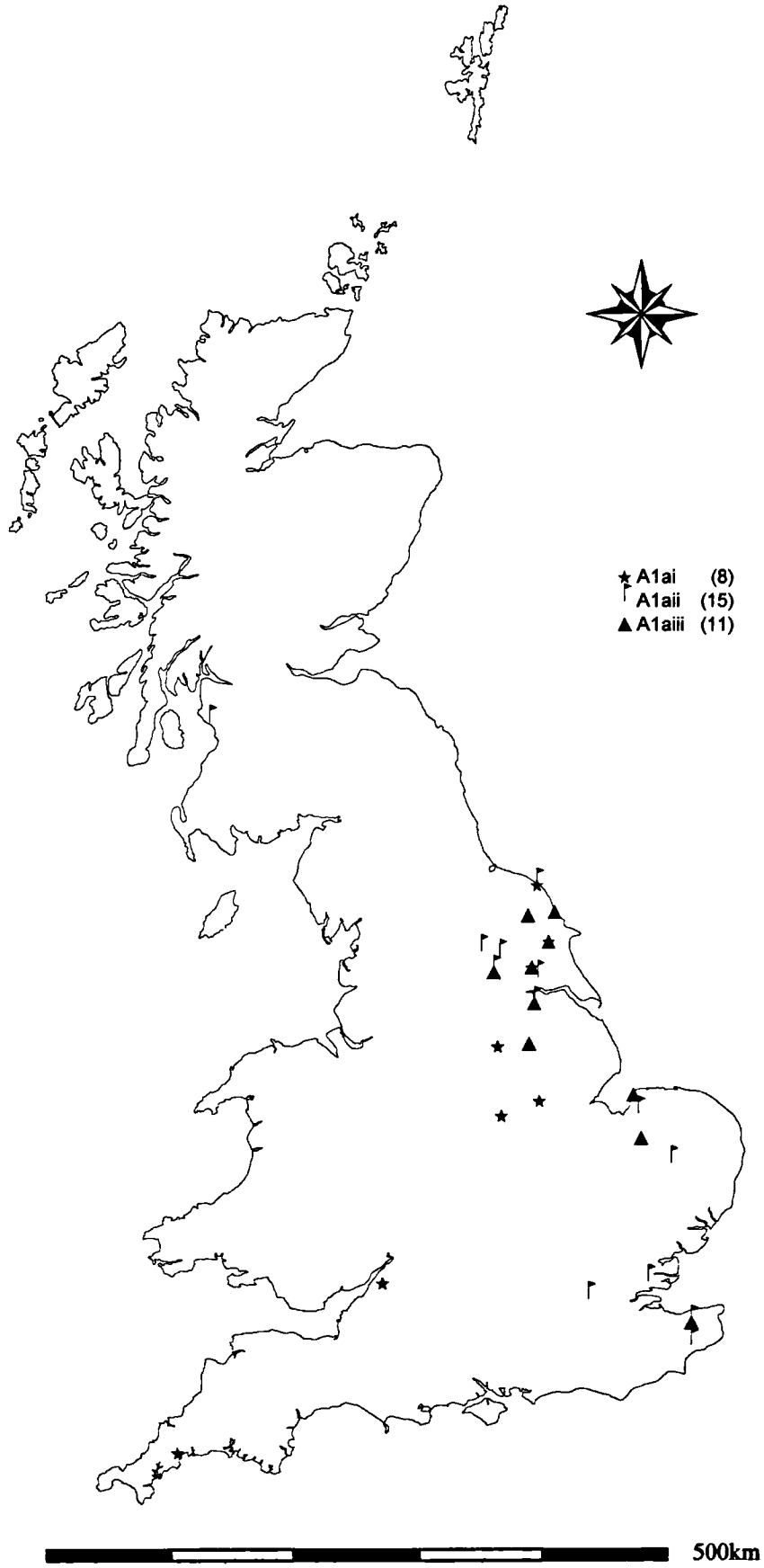
Map 4B: Distribution of Variant Terminal and Palmette Types



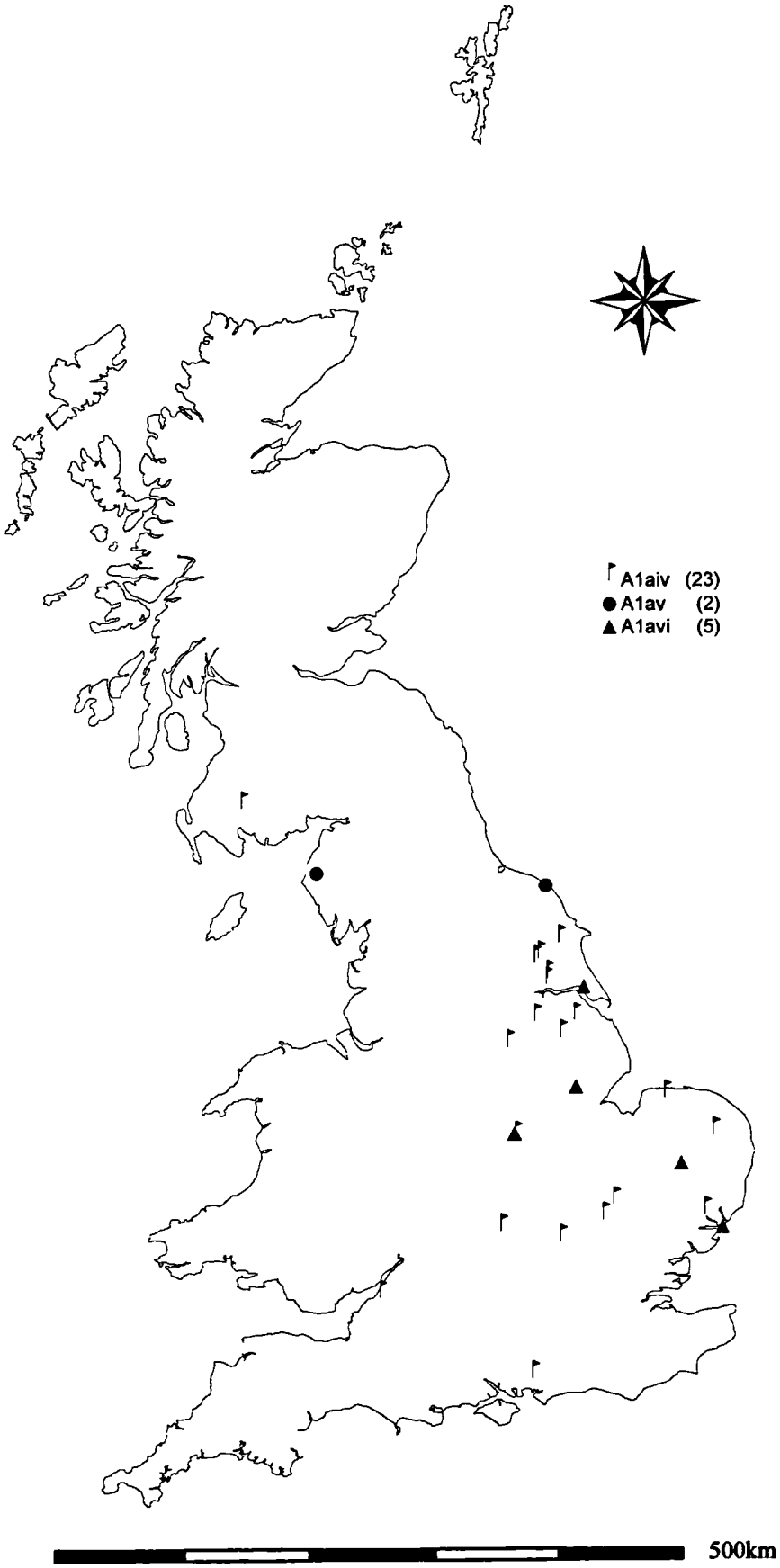
Map 5: Distribution of Sub-Type A1a Strap-Ends



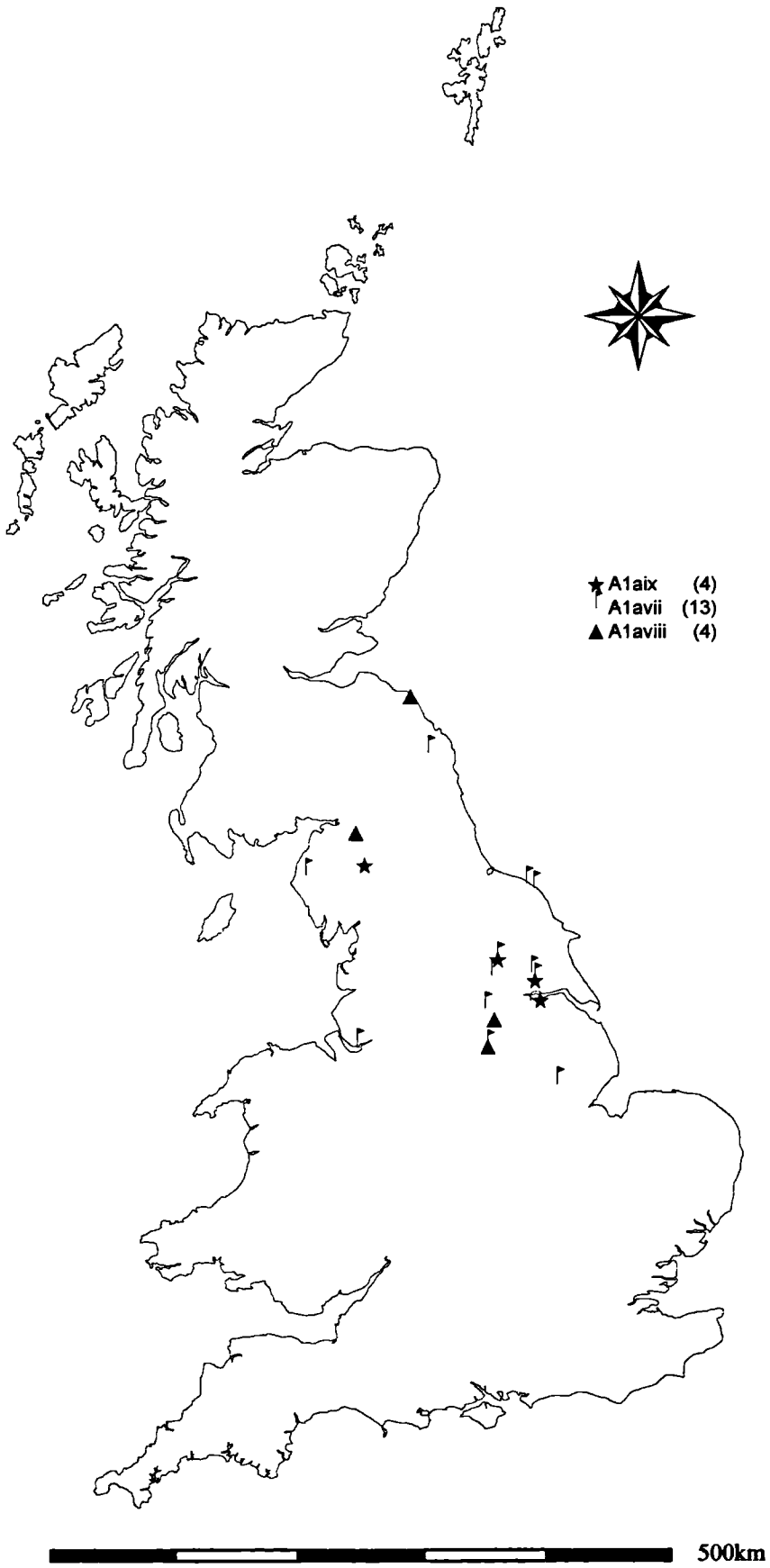
Map 6: Distribution of Group A1a, i-iii Strap-Ends



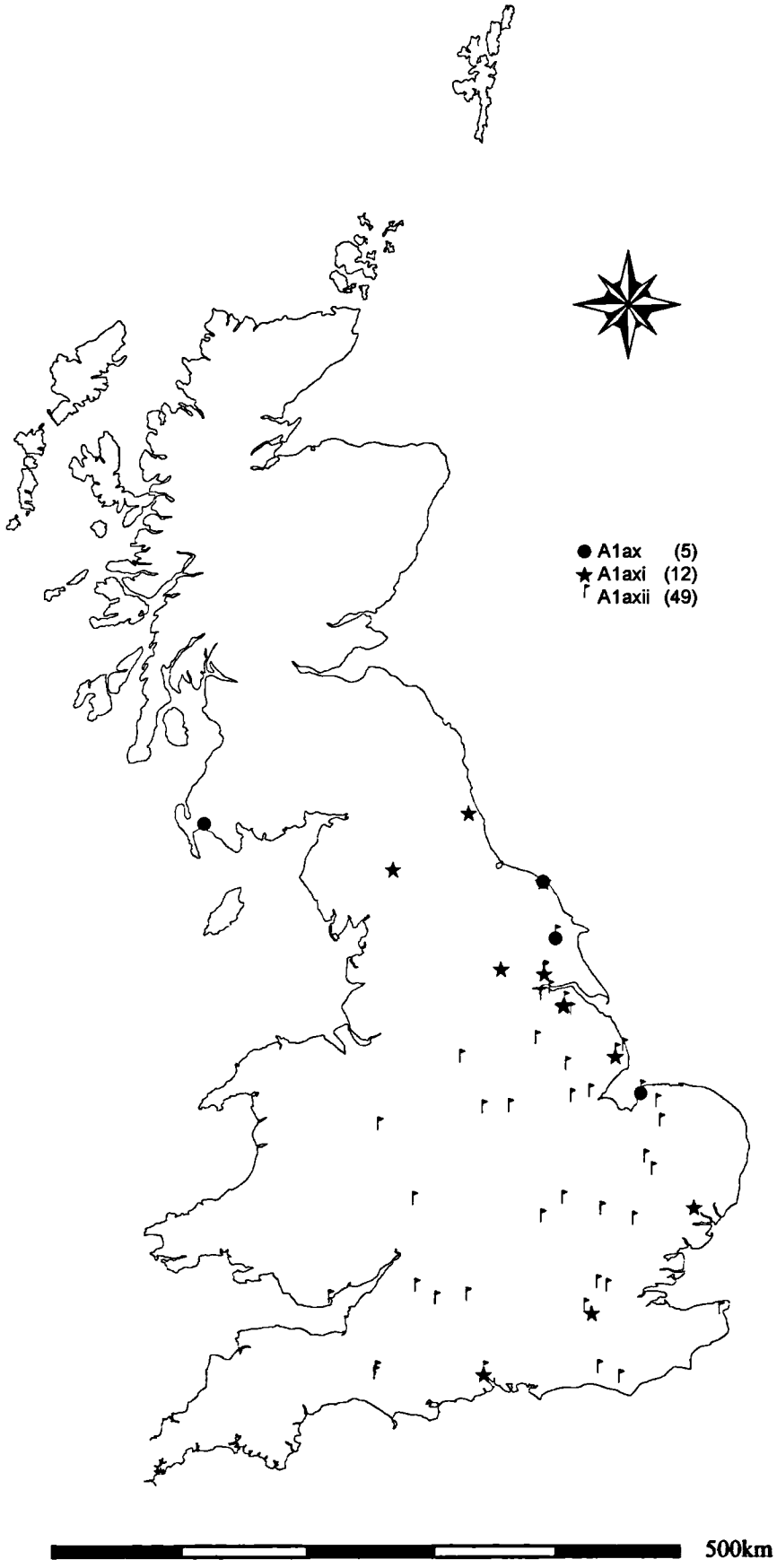
Map 7: Distribution of Group A1a, iv-vi Strap-Ends



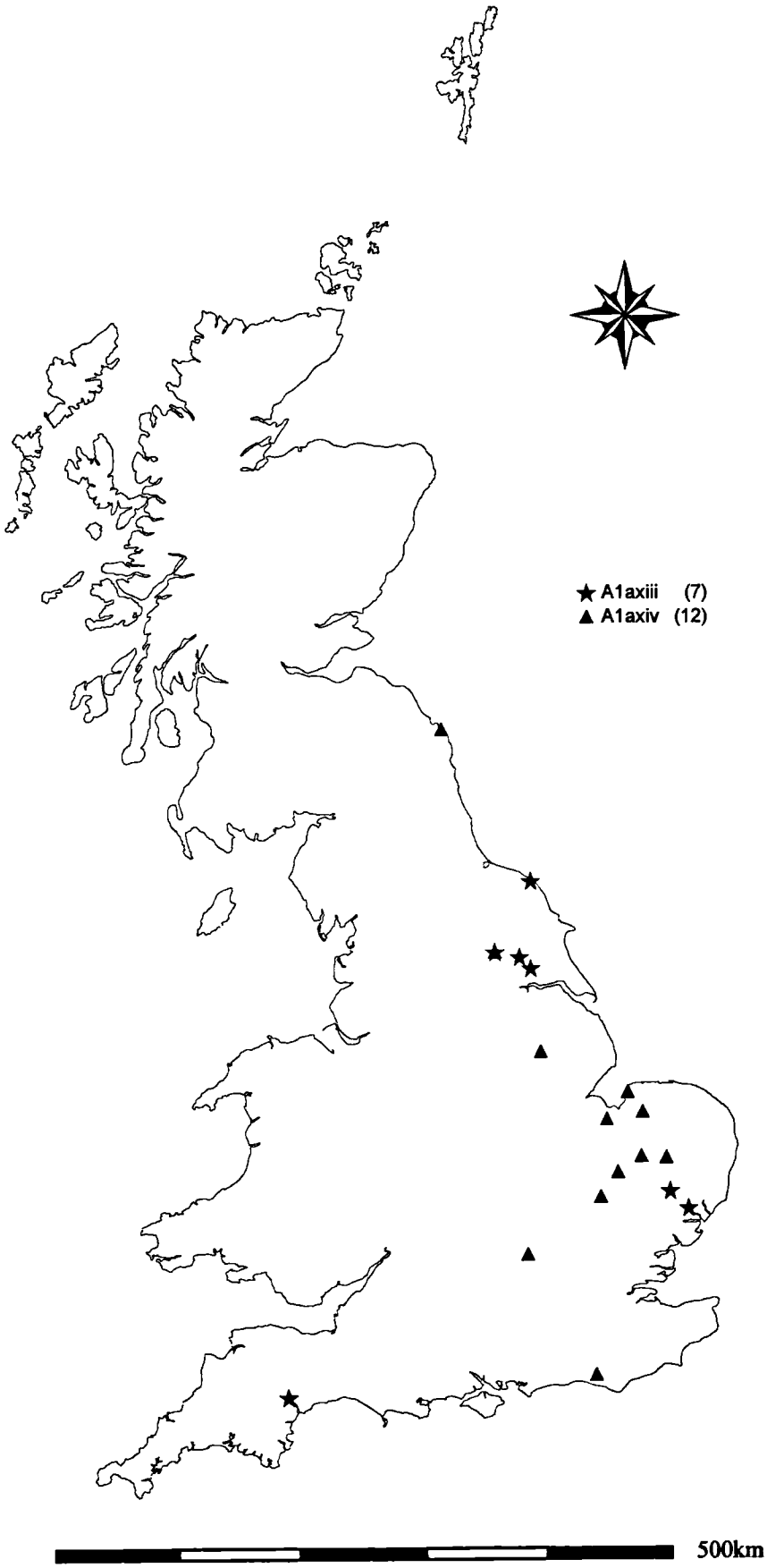
Map 8: Distribution of Group A1a, vii-ix Strap-Ends



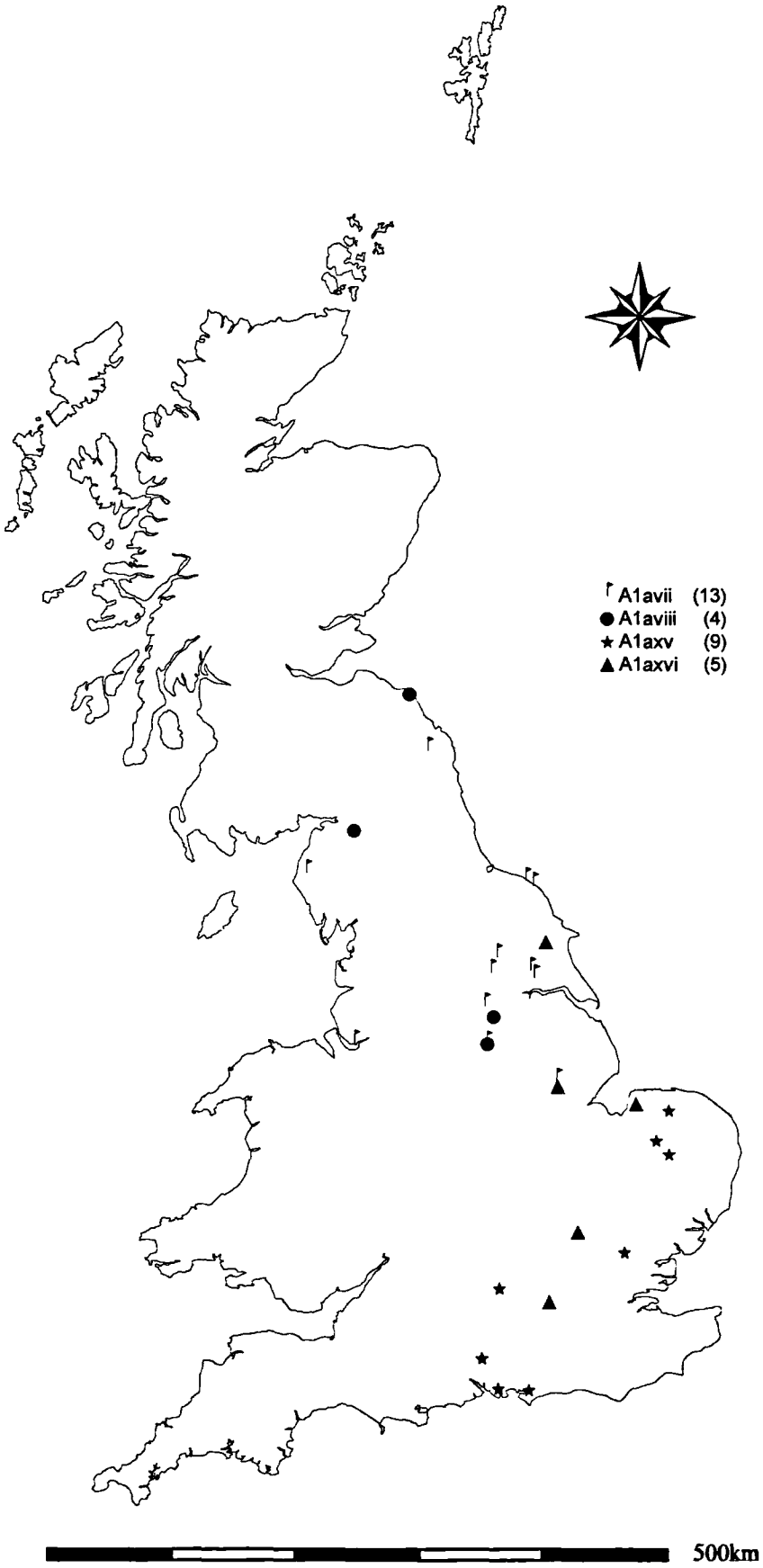
Map 9: Distribution of Group A1a, x-xii Strap-Ends



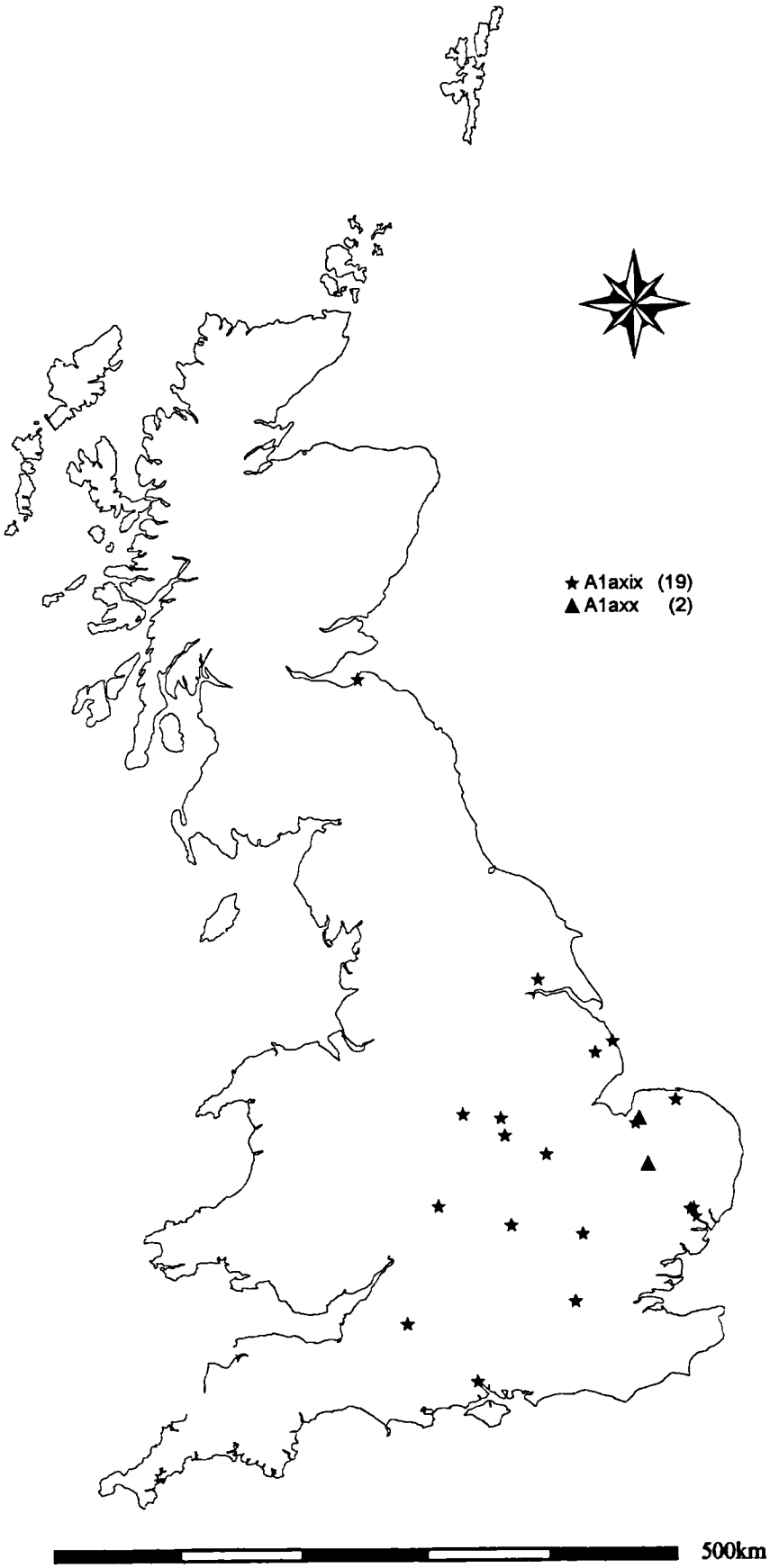
Map 10: Distribution of Group A1a, xiii-xiv Strap-Ends



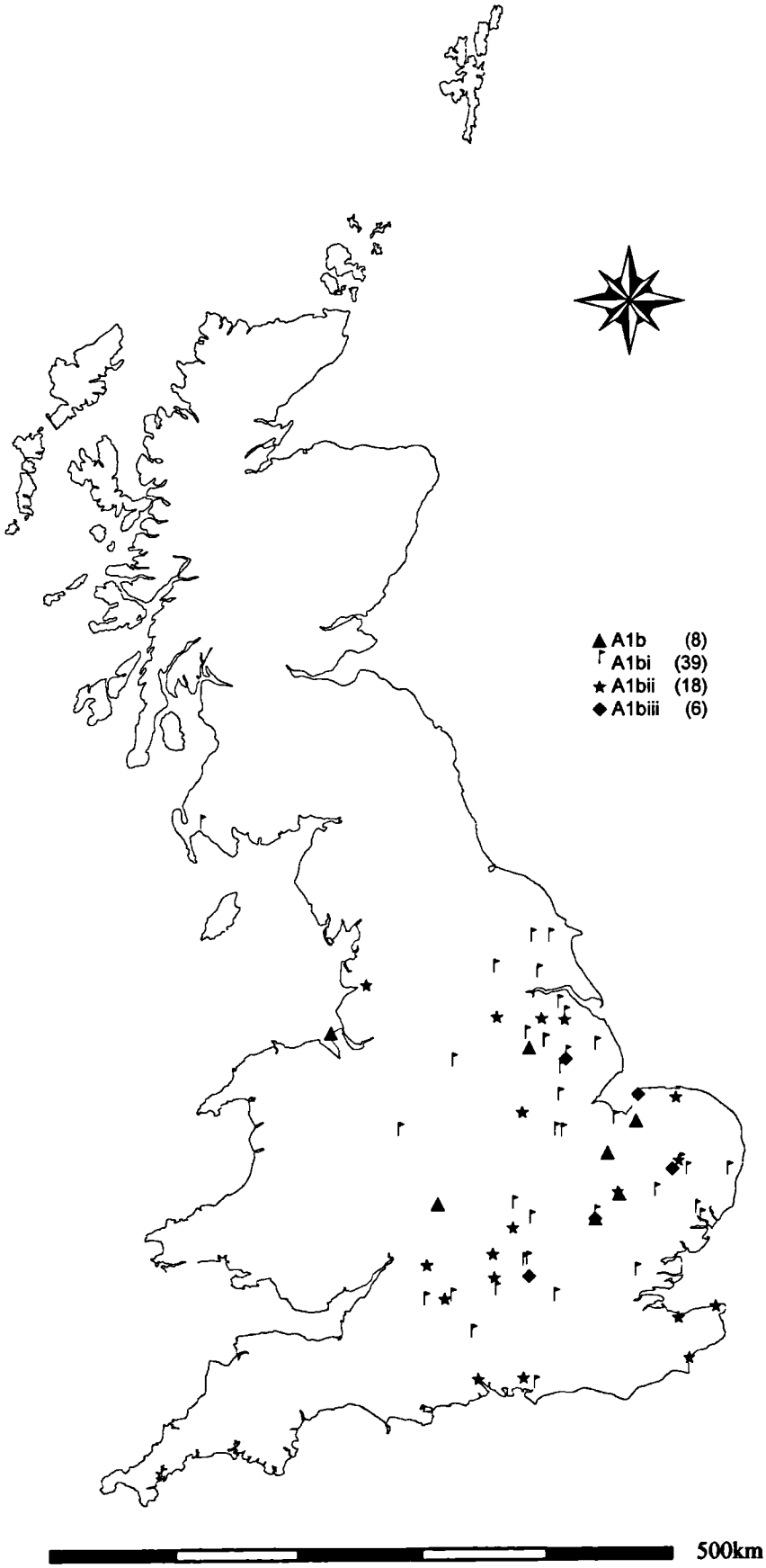
Map 11: Distribution of Group A1a, xv-xviii Strap-Ends



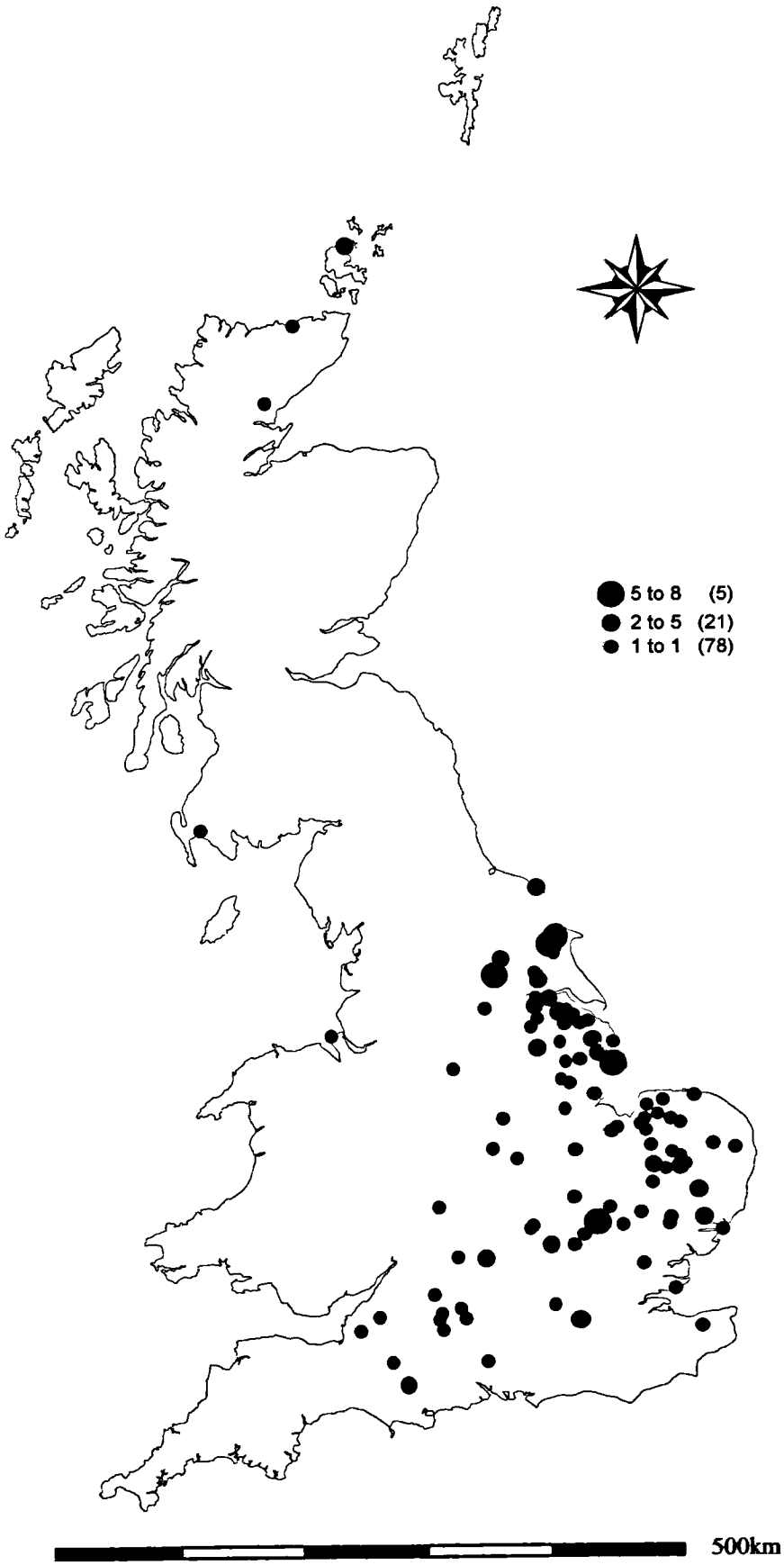
Map 12: Distribution of Group A1a, xix-xx Strap-Ends



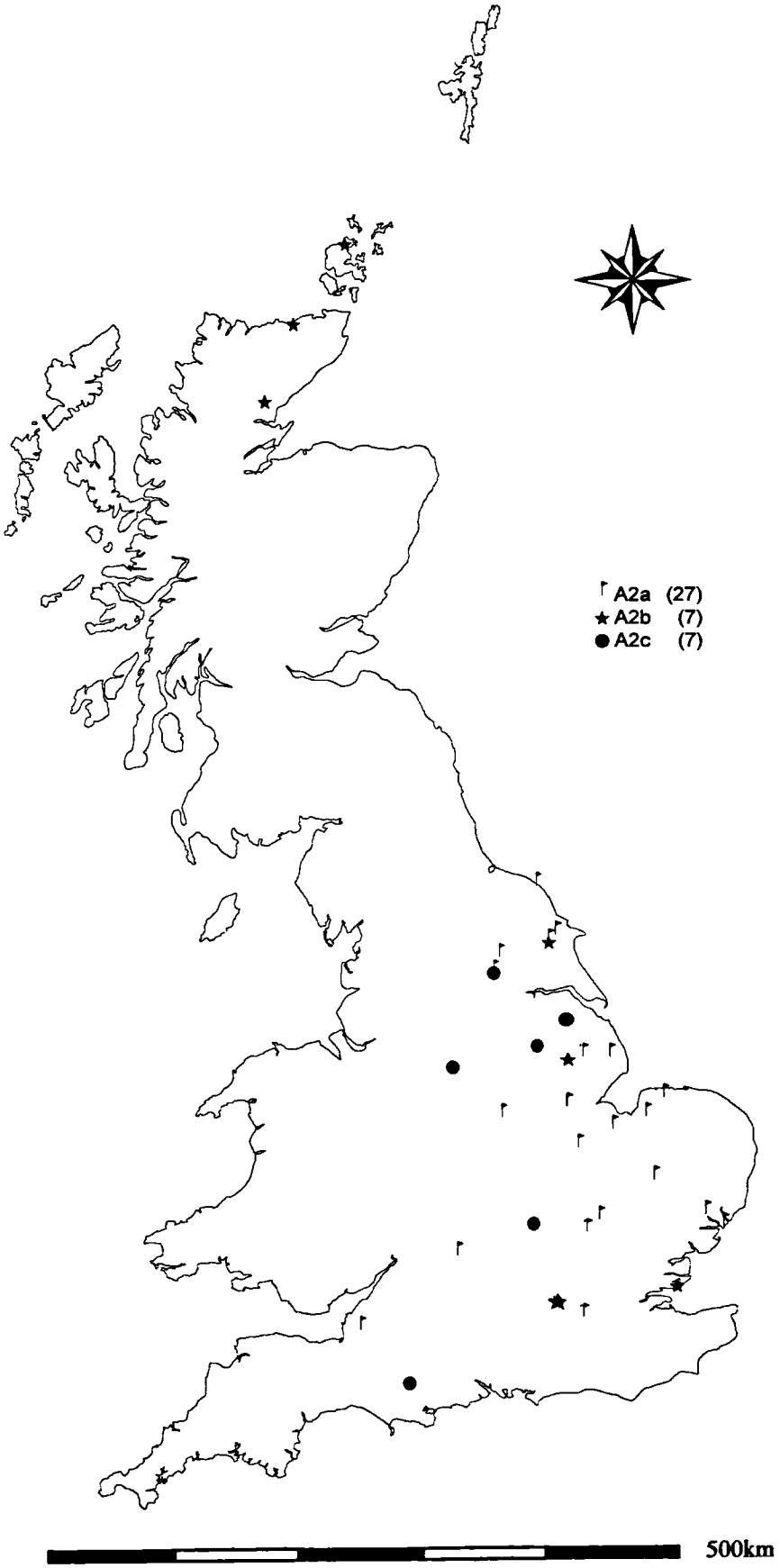
Map 13: Distribution of Sub-Type A1b Strap-Ends



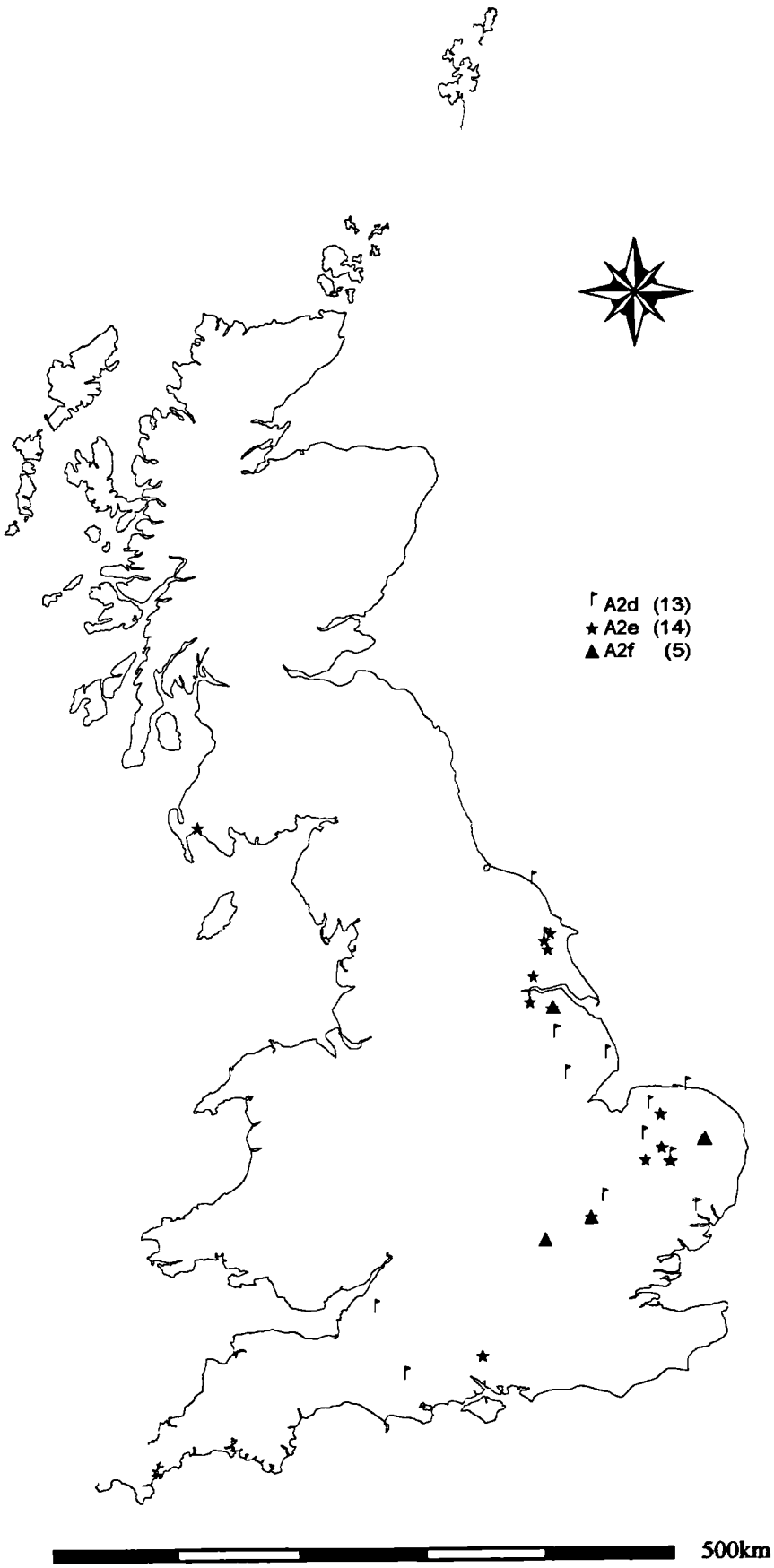
Map 14: Distribution of Type A2 Strap-Ends



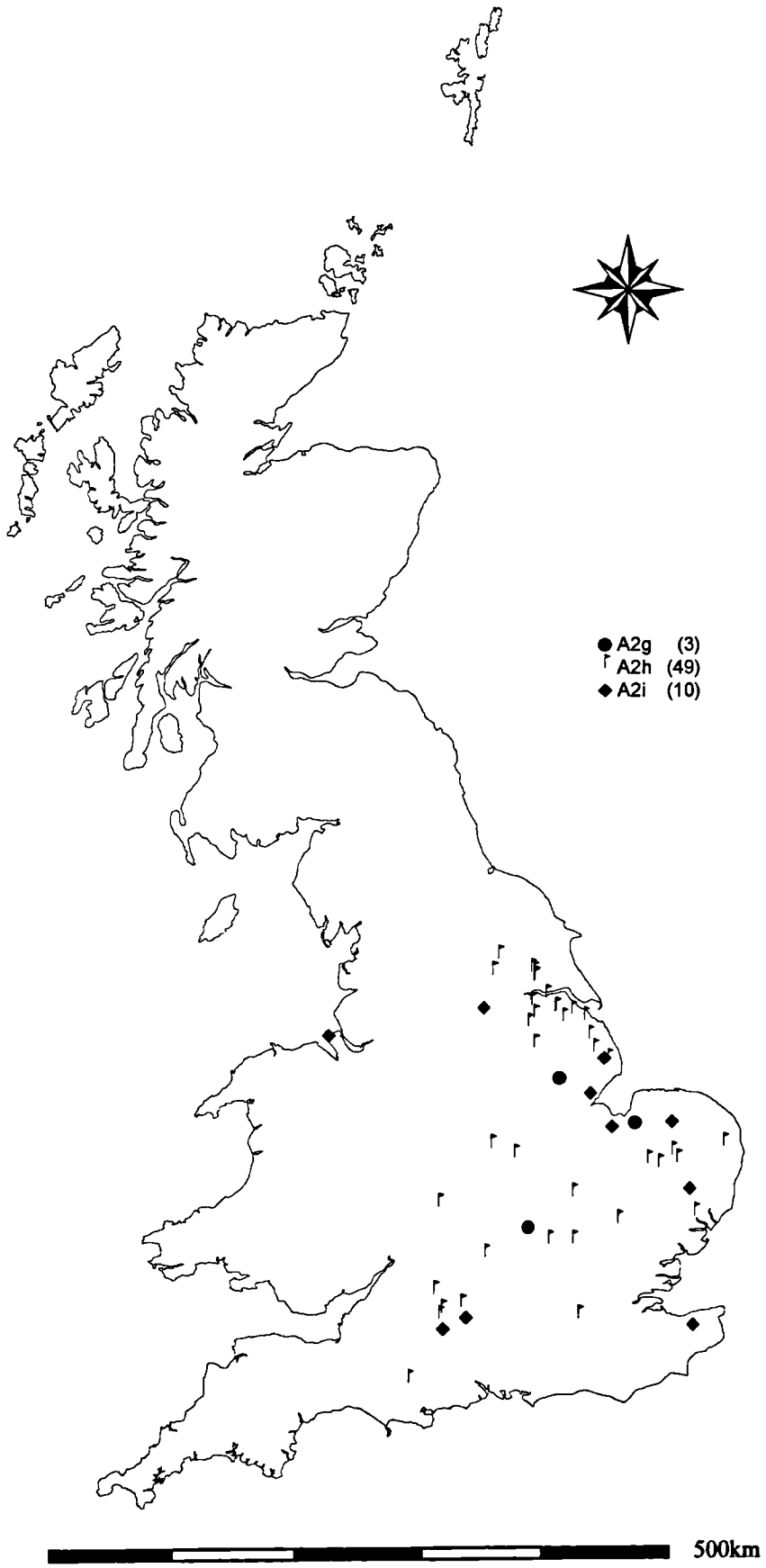
Map 15: Distribution of Sub-Type A2a-c Strap-Ends



Map 16: Distribution of Sub-Type A2d-f Strap-Ends

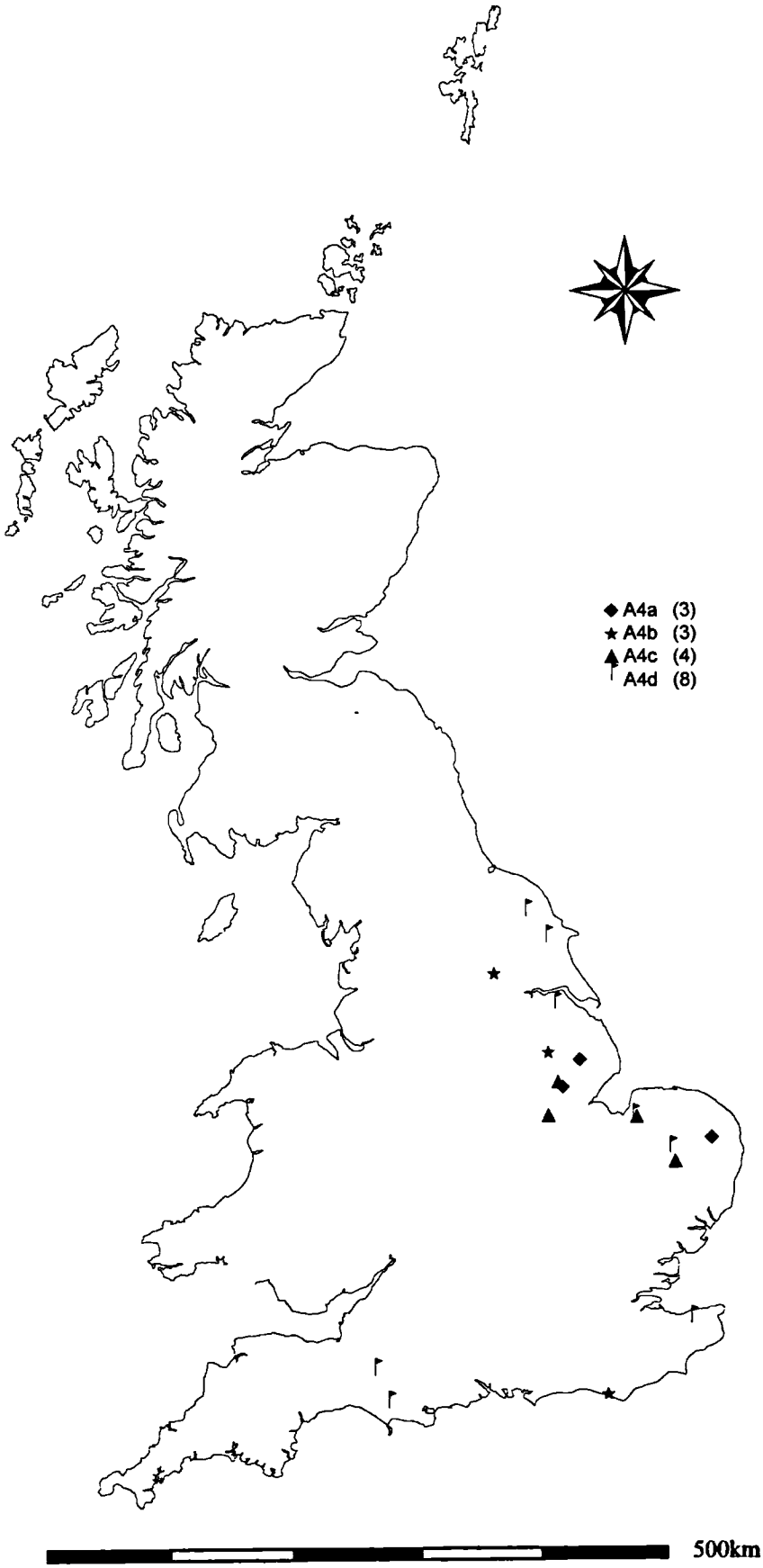


Map 17: Distribution of Sub-Type A2g-i Strap-Ends



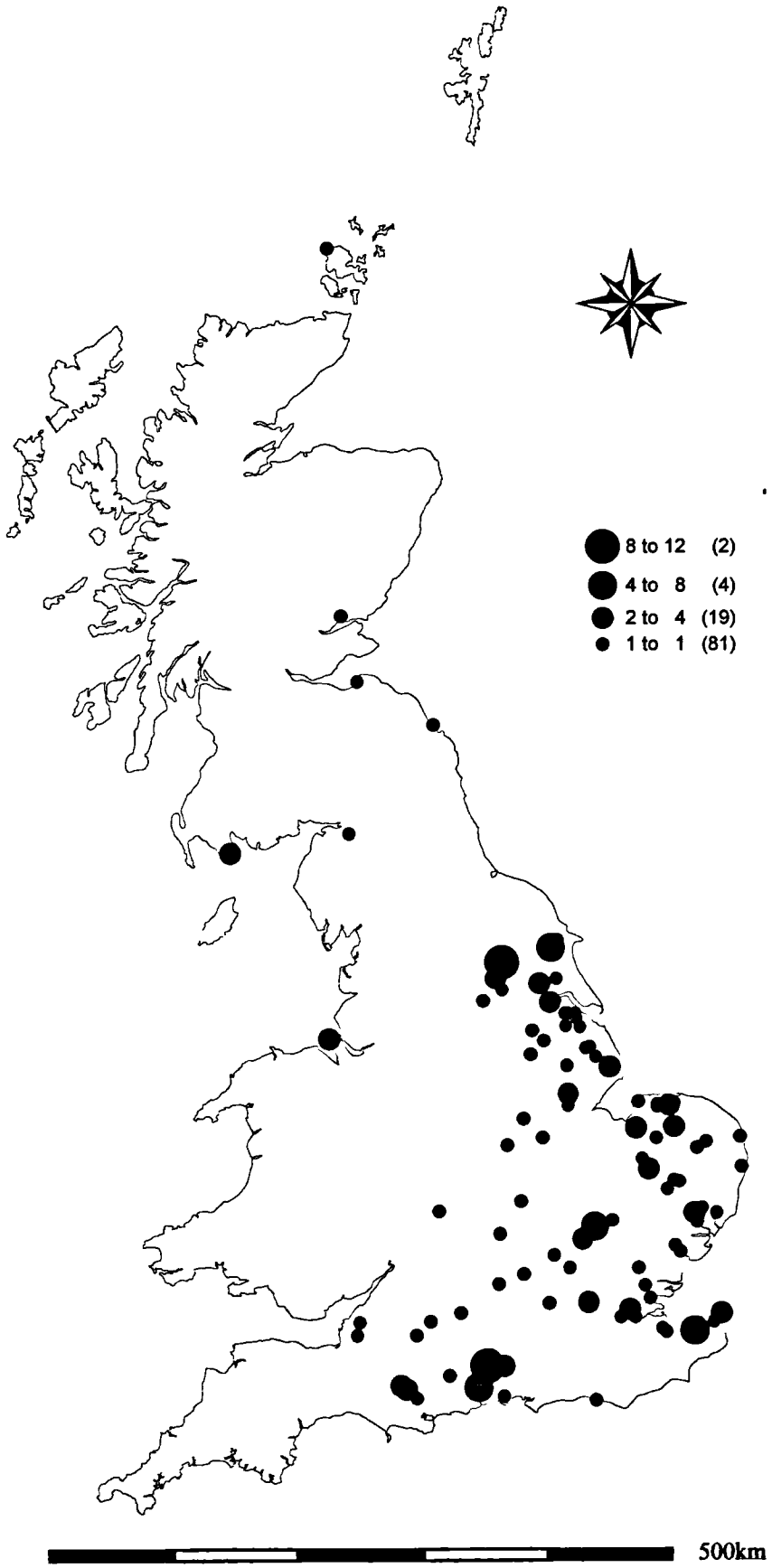
Map 18: Distribution of Type A3 Strap-Ends

Map 19: Distribution of Sub-Type A4a-d Strap-Ends

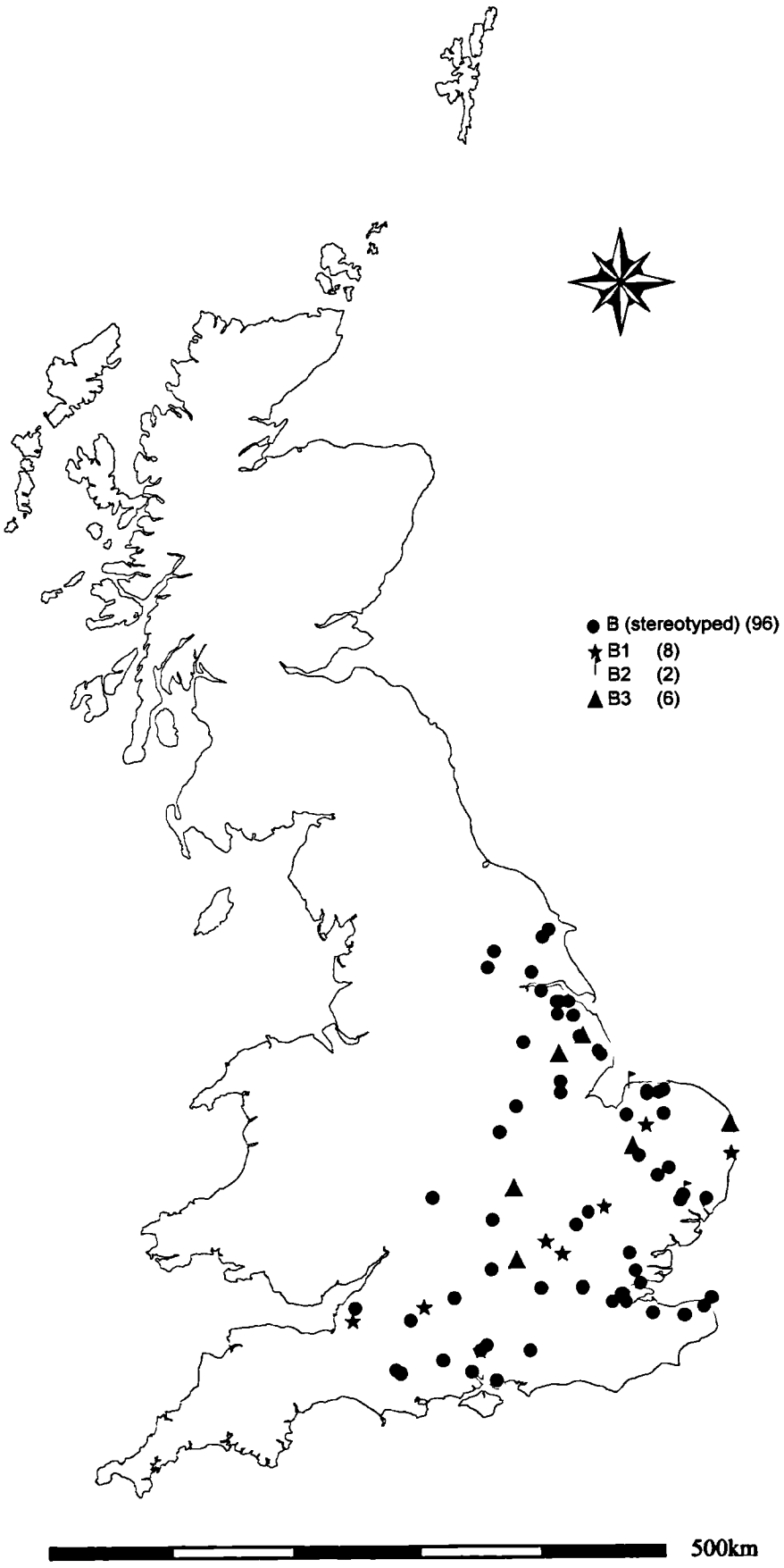



Map 20: Distribution of Sub-Type A5a-d Strap-Ends
A5a (22)
A5b (39)
A5c (16)
A5d (2)
100km

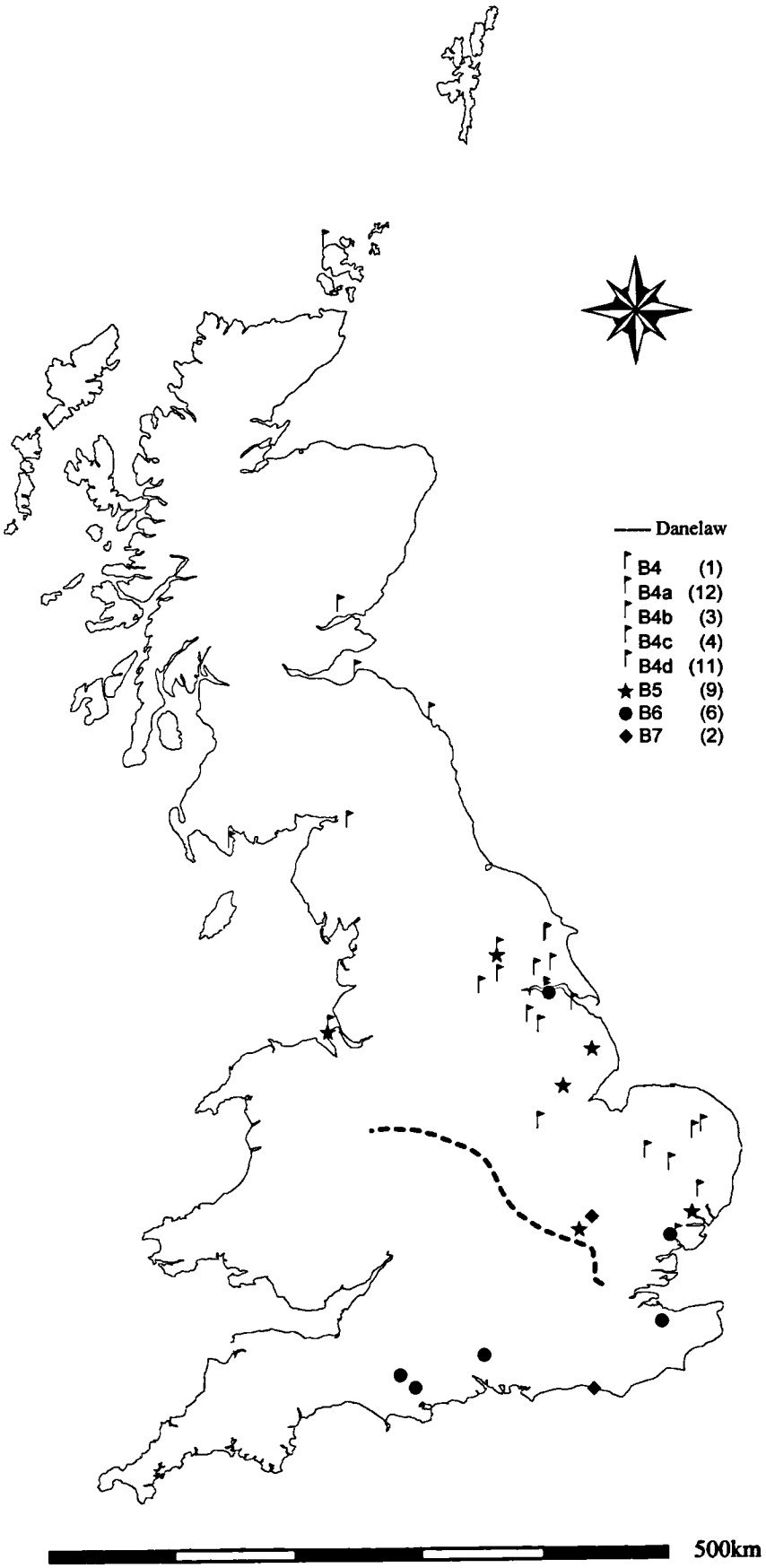
Map 21: Distribution of Class B Strap-Ends



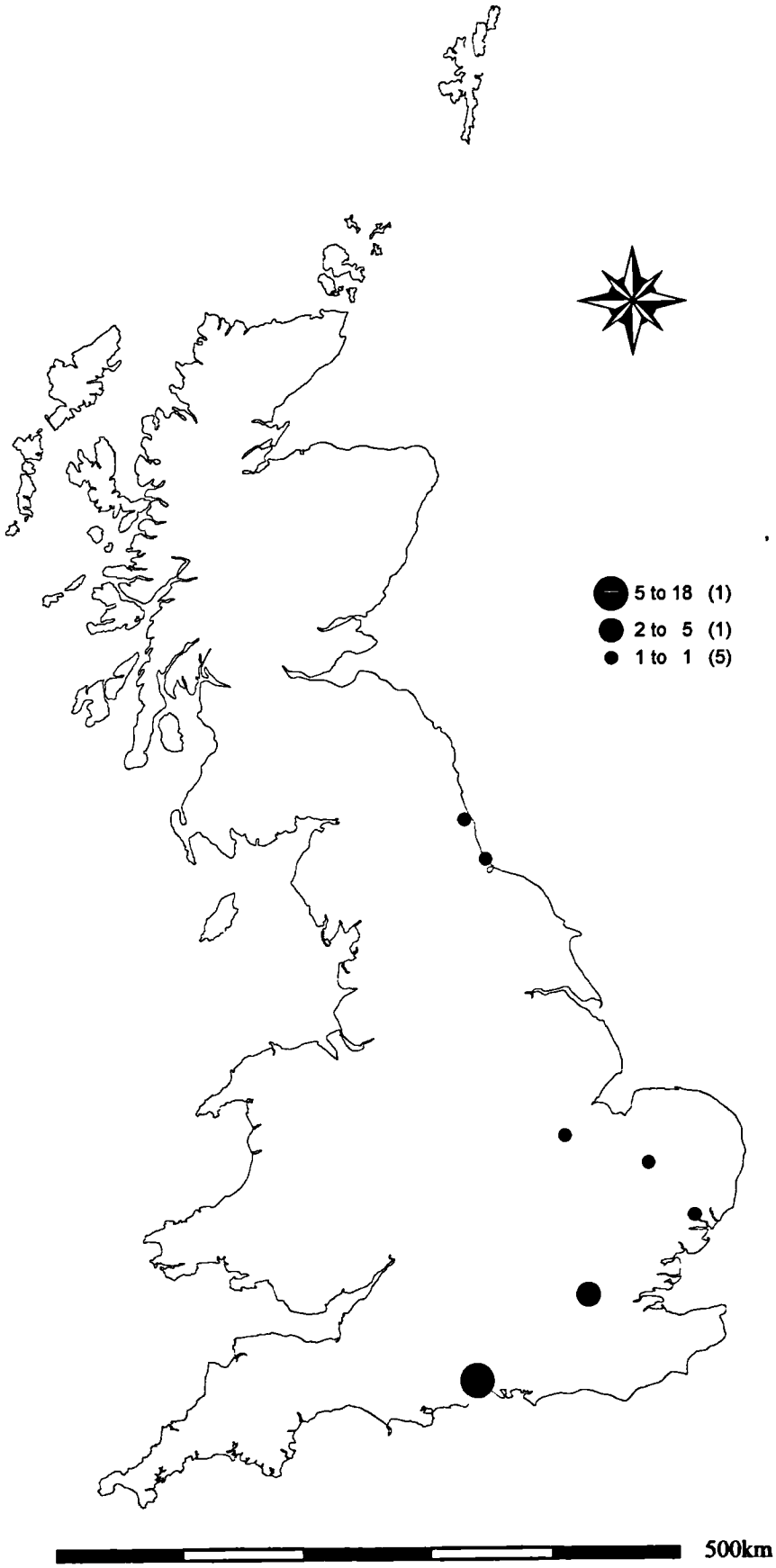
Map 22: Distribution of Type B (stereotyped) - B3 Strap-Ends



Map 23: Distribution of Type B4-7 Strap-Ends

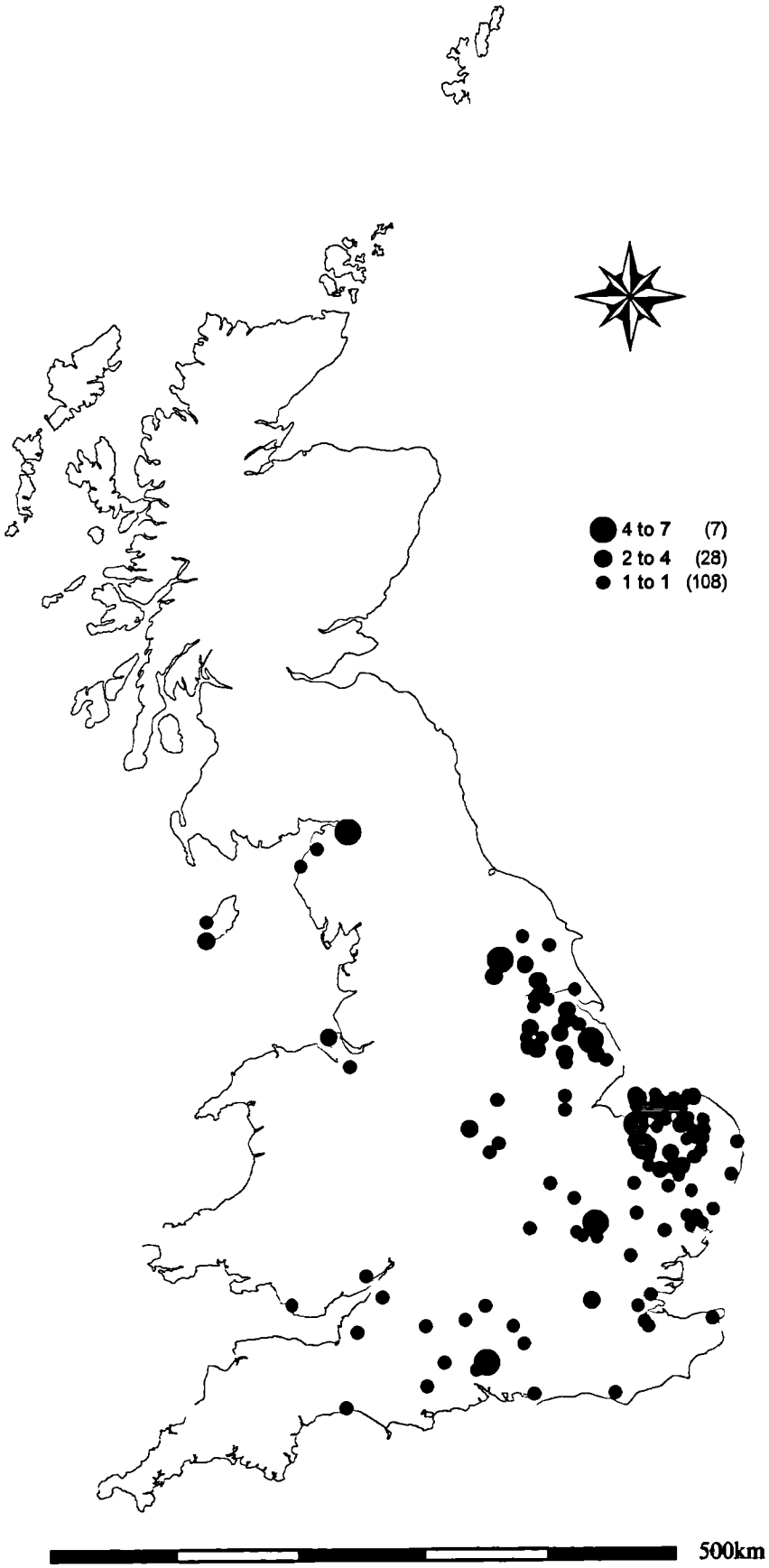


Map 24: Distribution of Class C Strap-Ends

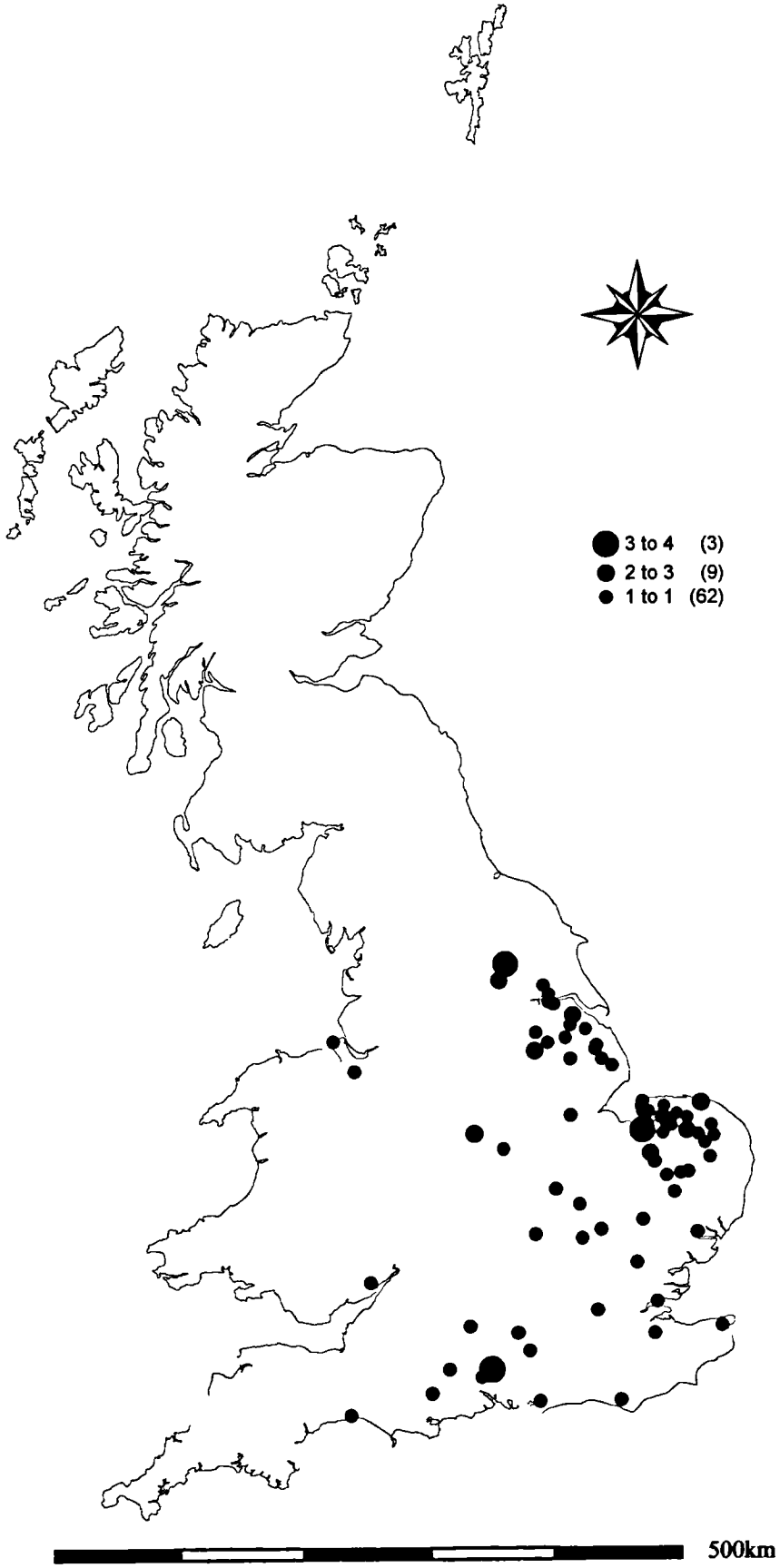


Map 25: Distribution of Class D Strap-Ends

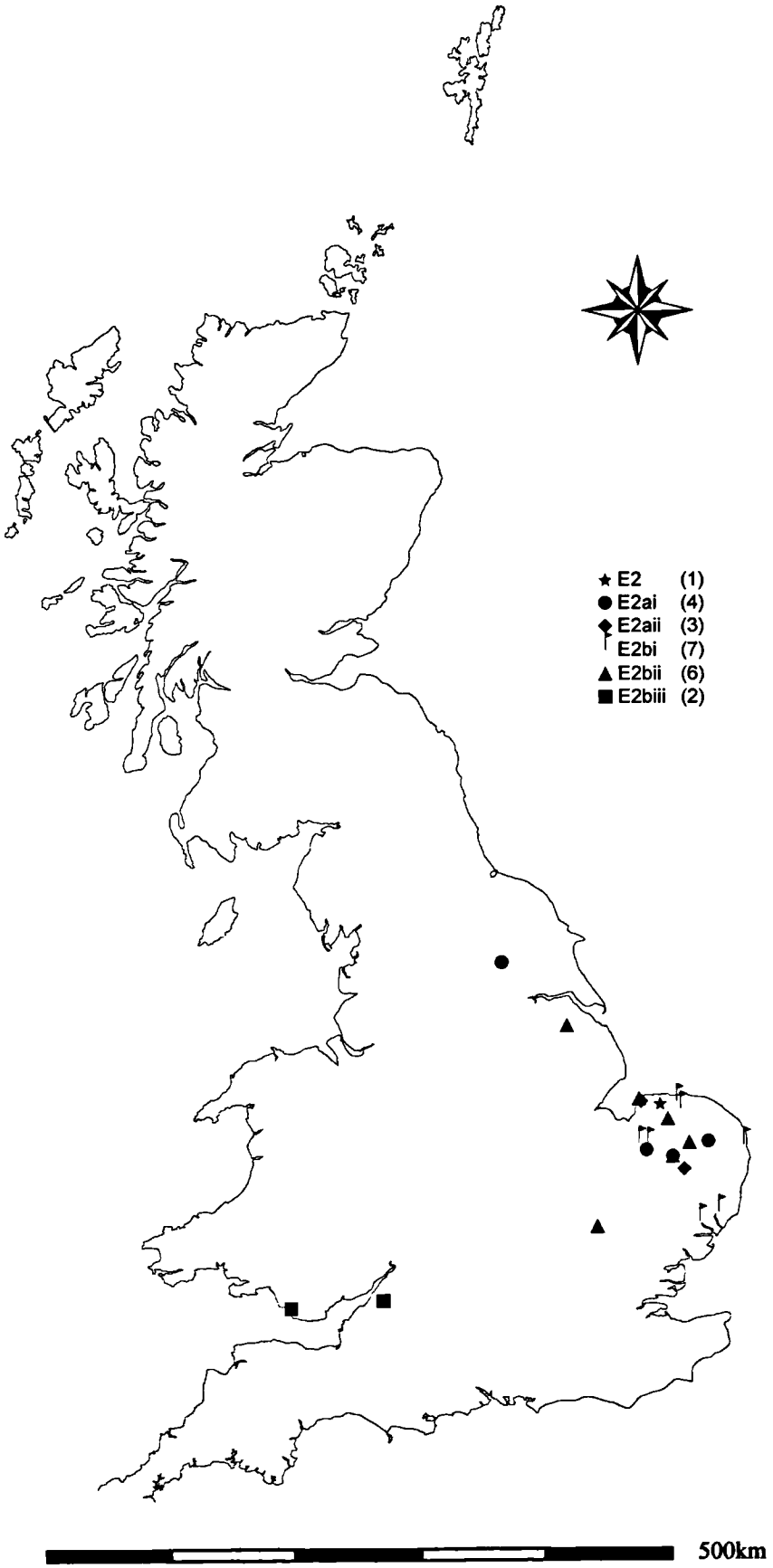
Map 26: Distribution of Class E Strap-Ends



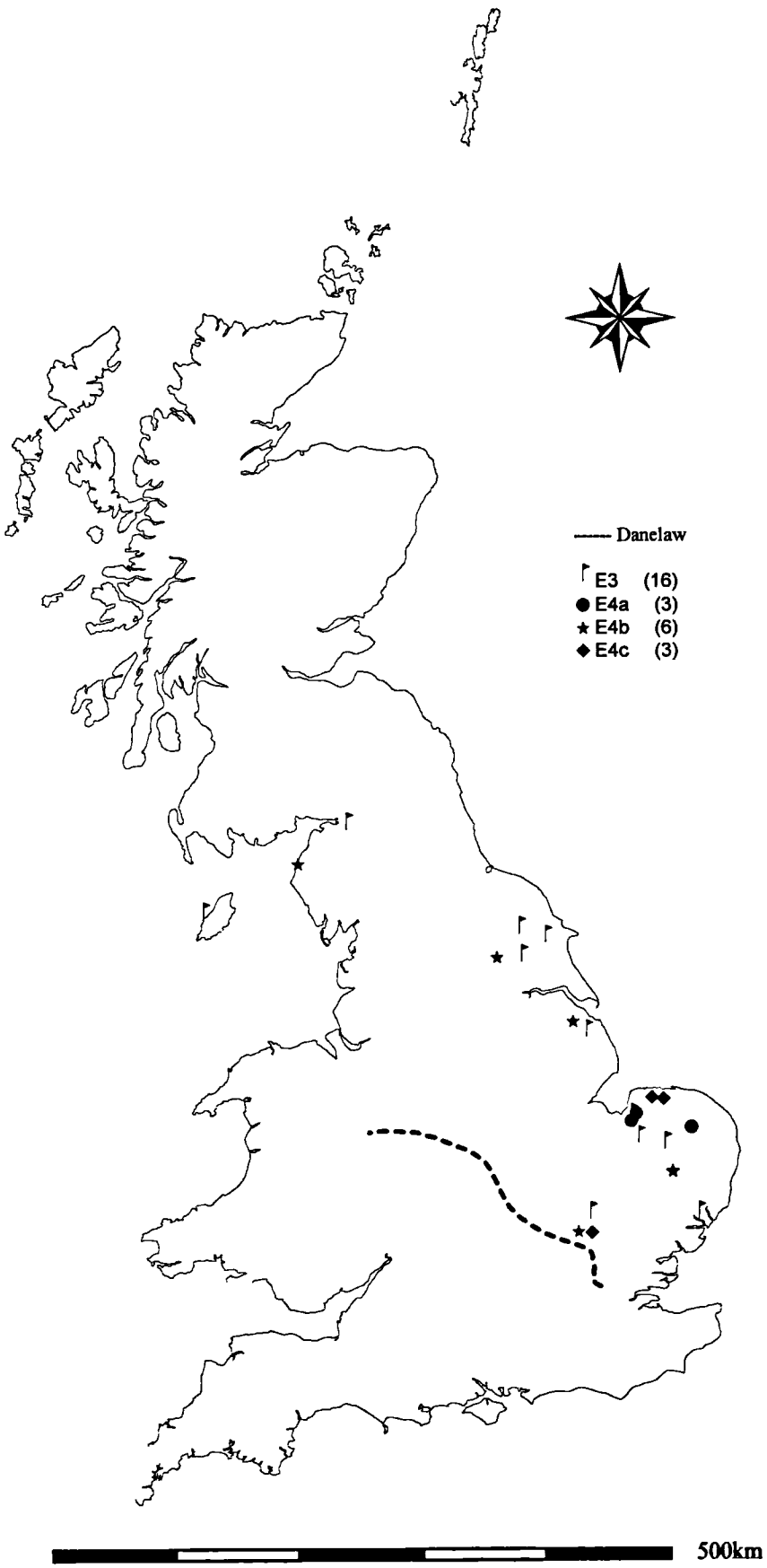
Map 27: Distribution of Type E1 Strap-Ends



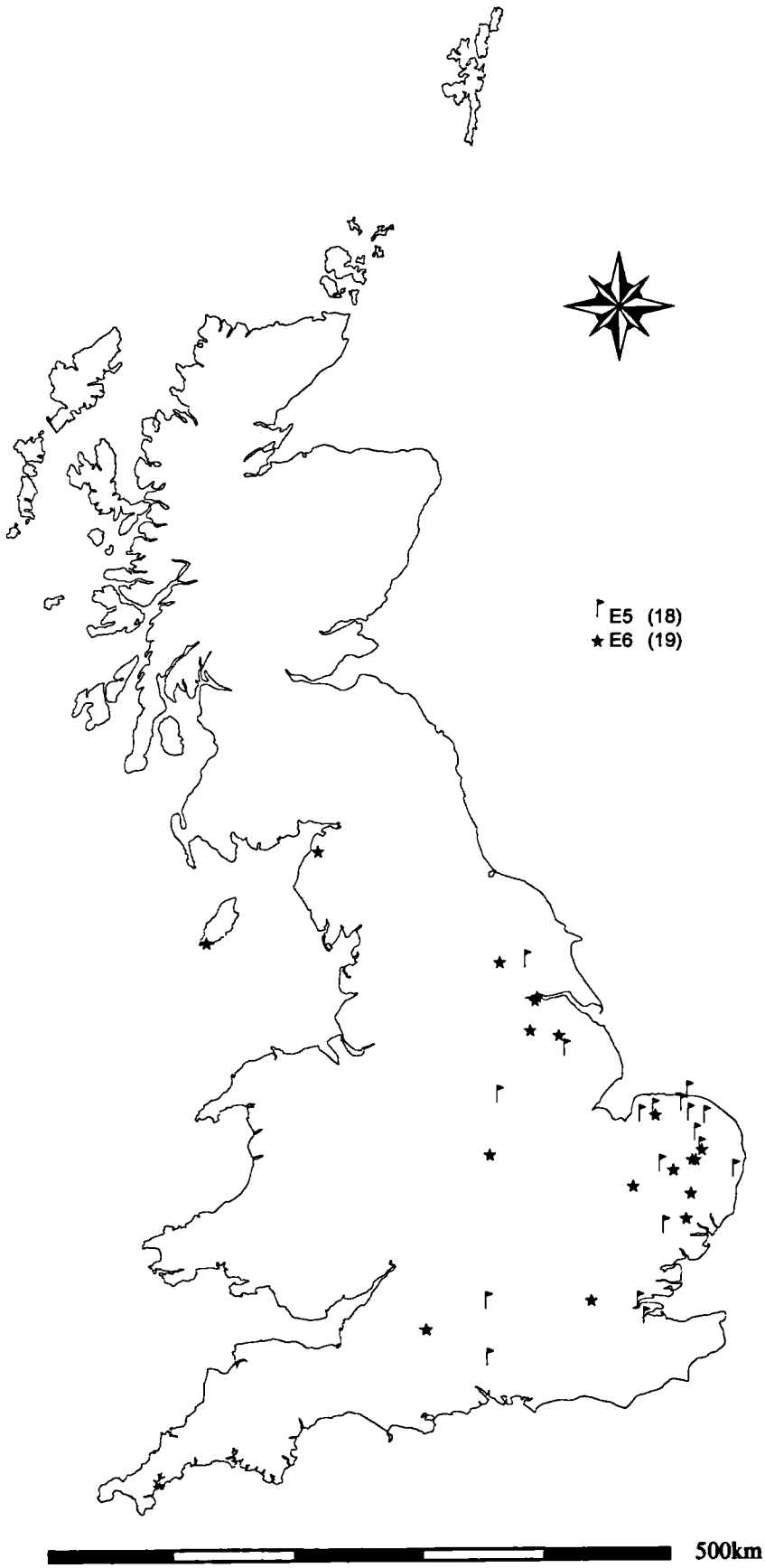
Map 28: Distribution of Type E2 Strap-Ends



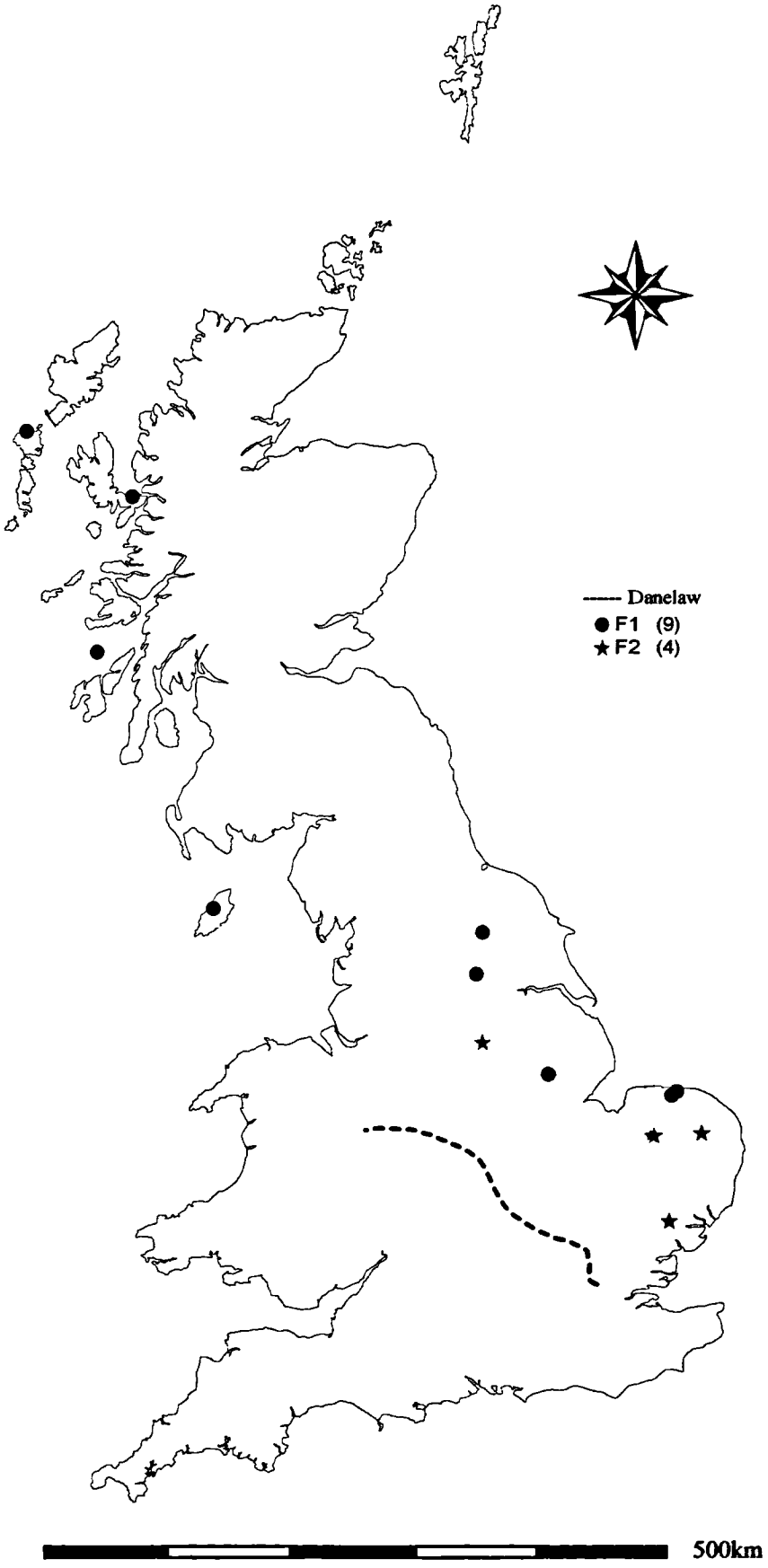
Map 29: Distribution of Type E3-4 Strap-Ends



Map 30: Distribution of Type E5-6 Strap-Ends

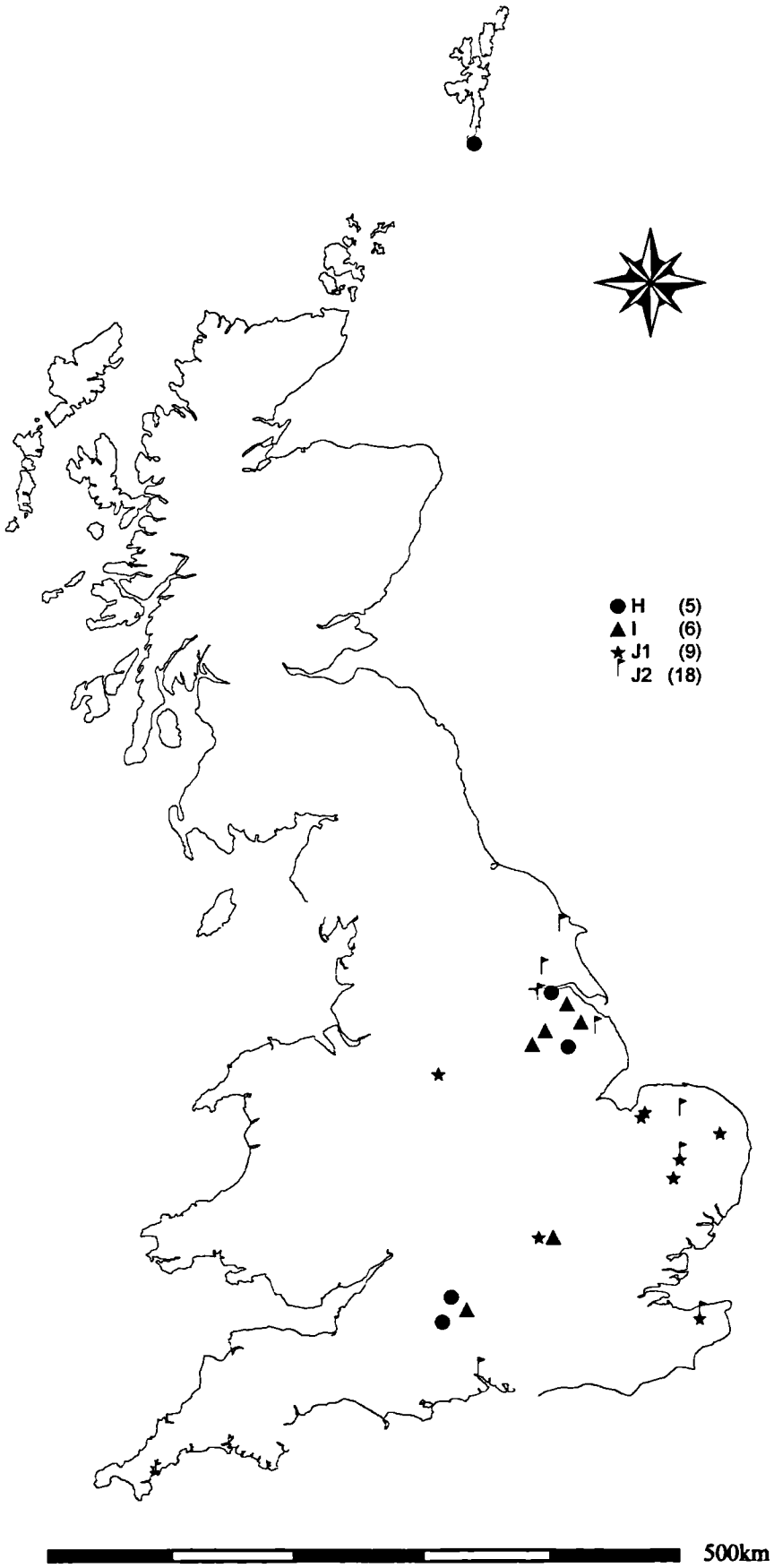


Map 31: Distribution of Class F Strap-Ends



Map 32: Distribution of Class G Strap-Ends

Map 33: Distribution of Class H-J Strap-Ends



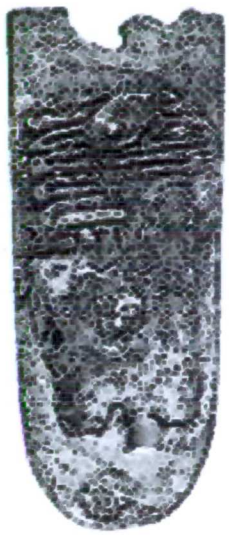


Fig. 2. 1: Remains of a textile strap or belt surviving on the reverse of a Class E strap-end from Essex (cat. no. 1154), Scale 2: 1

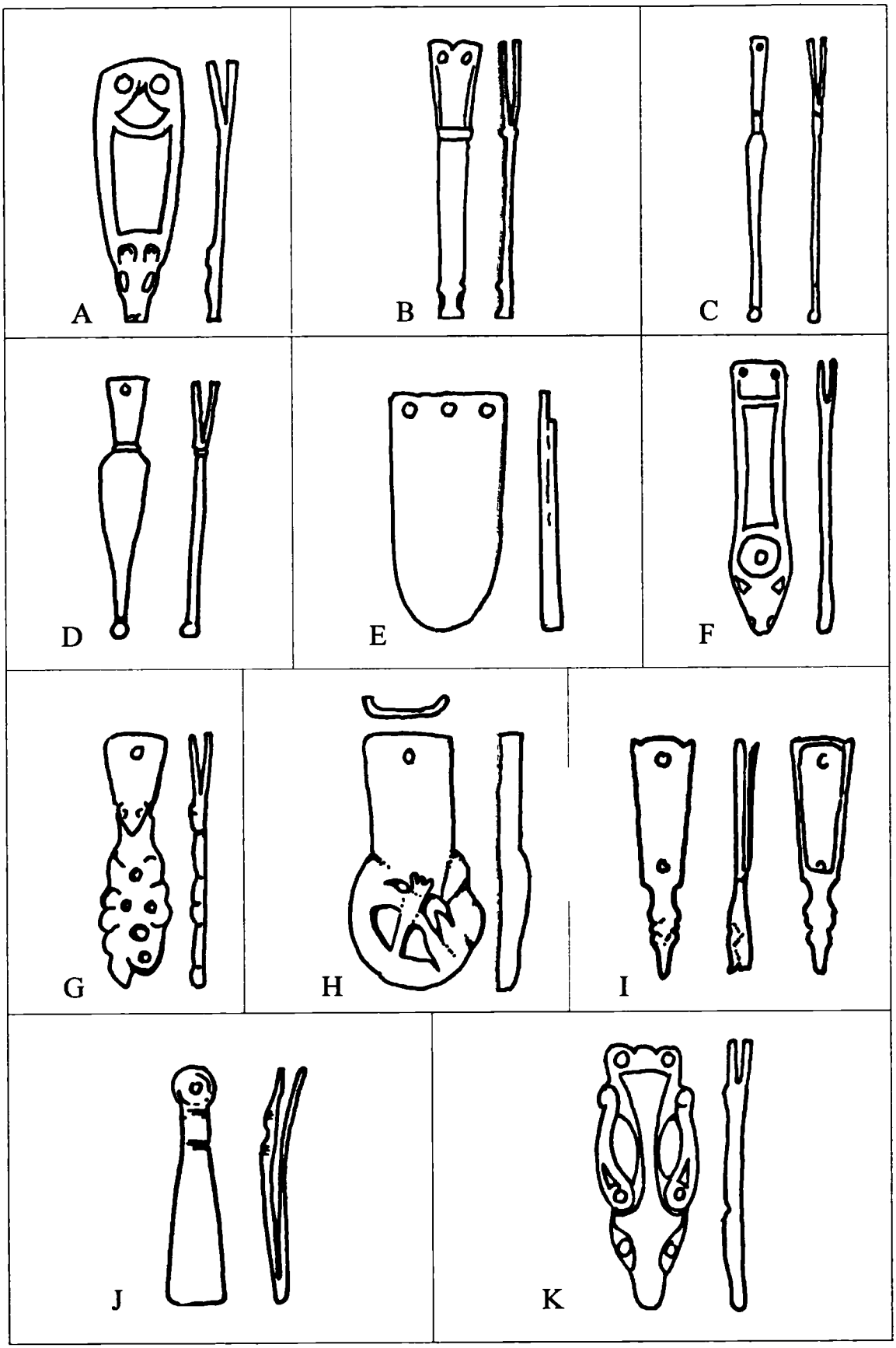


Fig. 3. 0: Diagram comparing principle classes of Late Saxon and Viking-age strap-end as set out in Chapter 3

Scale approx. 1: 1

Fig. 3. 1: Strap-ends of Groups A1a, i & ii

A: cat. no. 241; B: cat. no. 242
C: cat, no. 246; D: cat. no. 252; E: cat. no. 258
Scale 1: 1.5

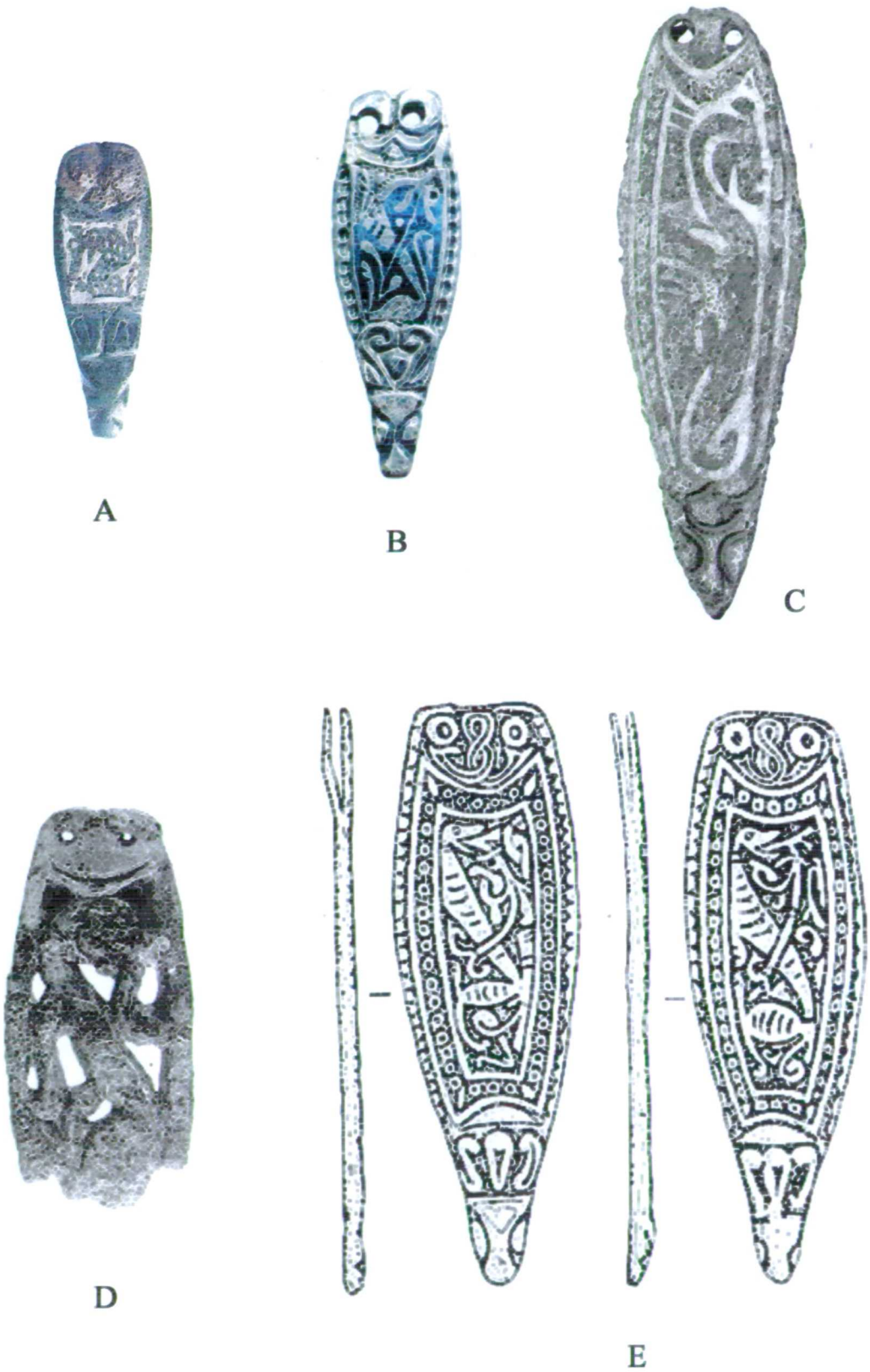


Fig. 3. 2: Strap-ends of Groups A1a, iii & iv

A: cat. no. 260; B: cat. no. 273; C: cat, no. 289
D: cat. no. 291; E: cat. no. 293
Scale 1.5: 1

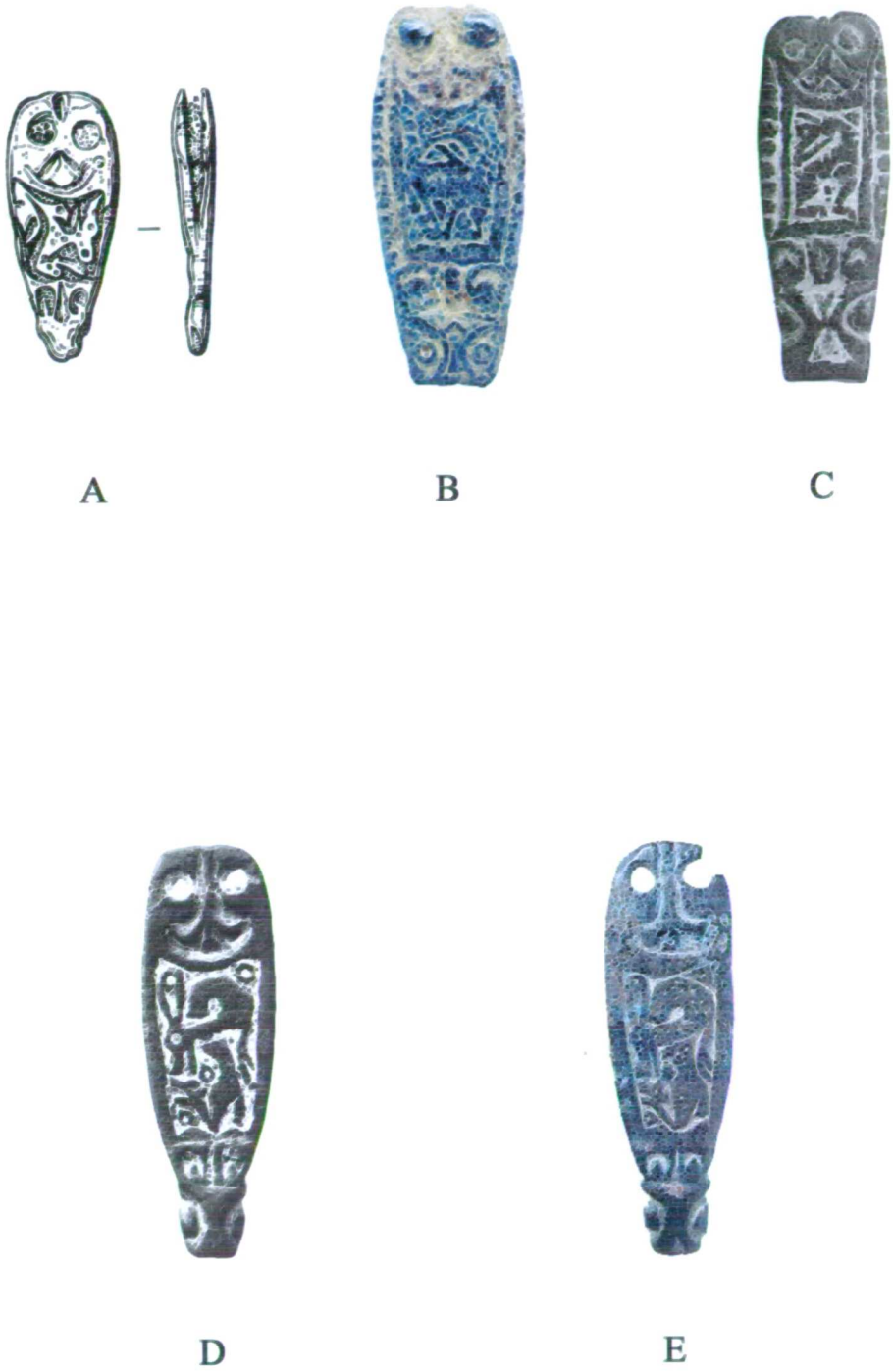


Fig. 3. 3: Strap-ends of Groups A1a, v, vi & vii

A: cat. no. 294; B: cat. no. 297; C: cat. no. 299
D: cat. no. 308; E: cat. no. 311
Scale 1: 1.5

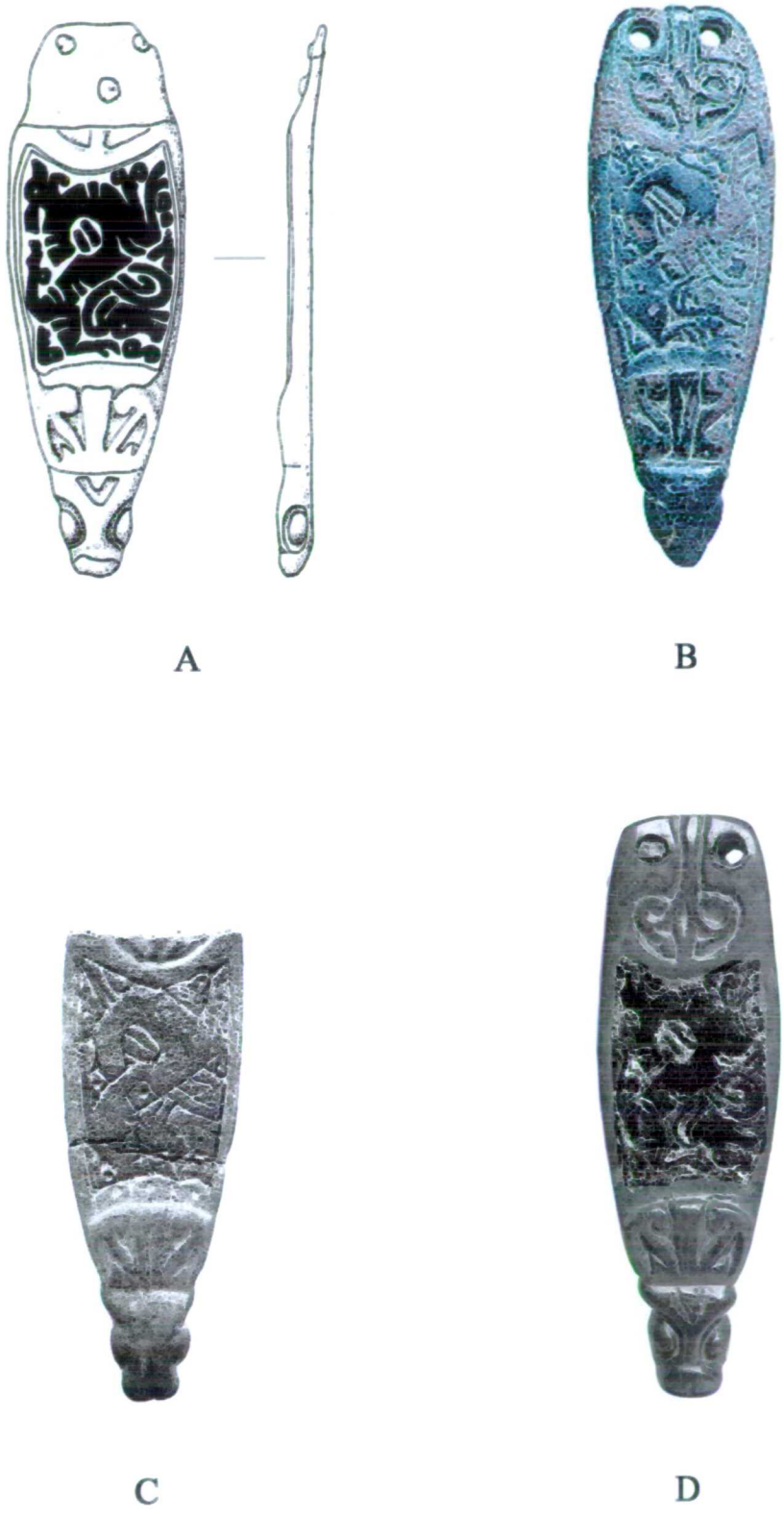


Fig. 3. 4: Strap-ends of Group A1a, viii

A: cat. no. 314; B: cat. no. 315
C: cat. no. 316; D: cat. no. 317
Scale 1.5: 1

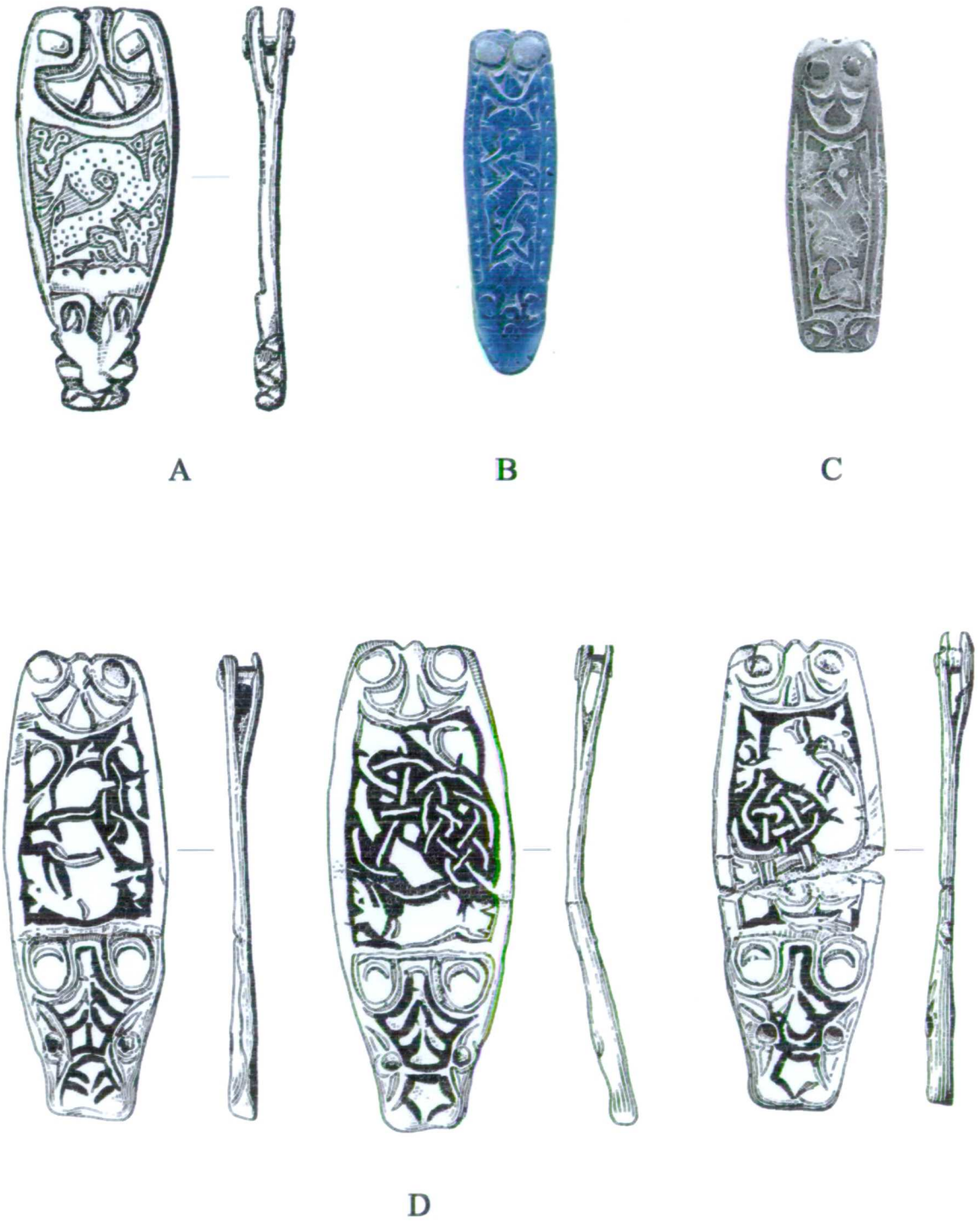


Fig. 3. 5: Strap-ends of Groups A1a, ix & x

A: cat. no. 321; B: cat. no. 325; C: cat. no. 326
D: cat. no. 328
Scale 1.5: 1

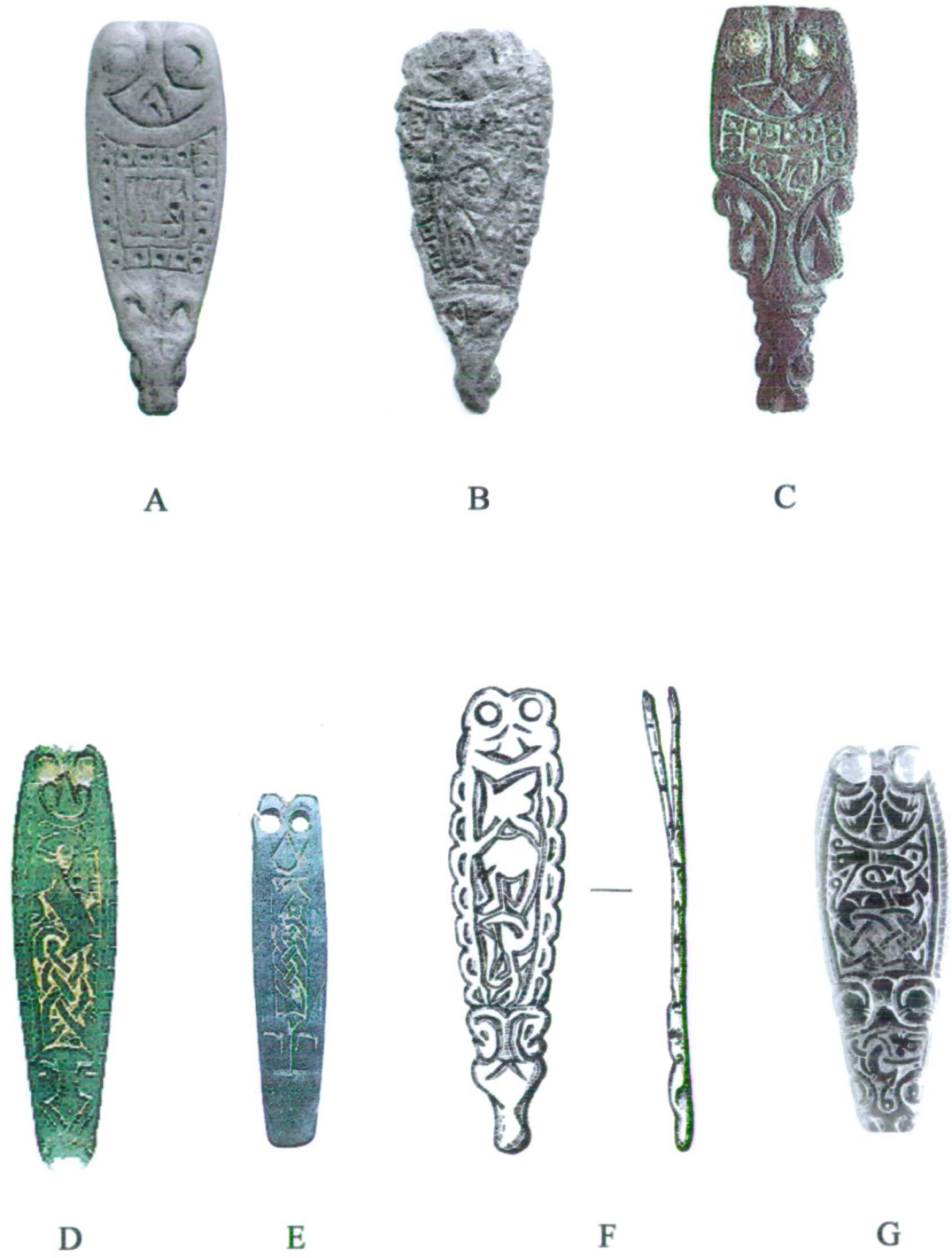


Fig. 3. 6: Strap-ends of Groups A1a, xi & xii

A: cat. no. 336; B: cat. no. 341; C: cat. no. 342
D: cat. no. 353; E: cat, no. 362; F: cat. no. 385; G: cat. no. 390
Scale 1.5: 1

Fig. 3. 7: Strap-ends of Group A1a, xiv

A: cat. no. 404; B: cat. no. 405; C: cat. no. 406; D: cat. no. 407
E: cat. no. 408; F: cat. no. 409; G: cat. no. 410; H: cat. no. 412
Scale 1.5: 1

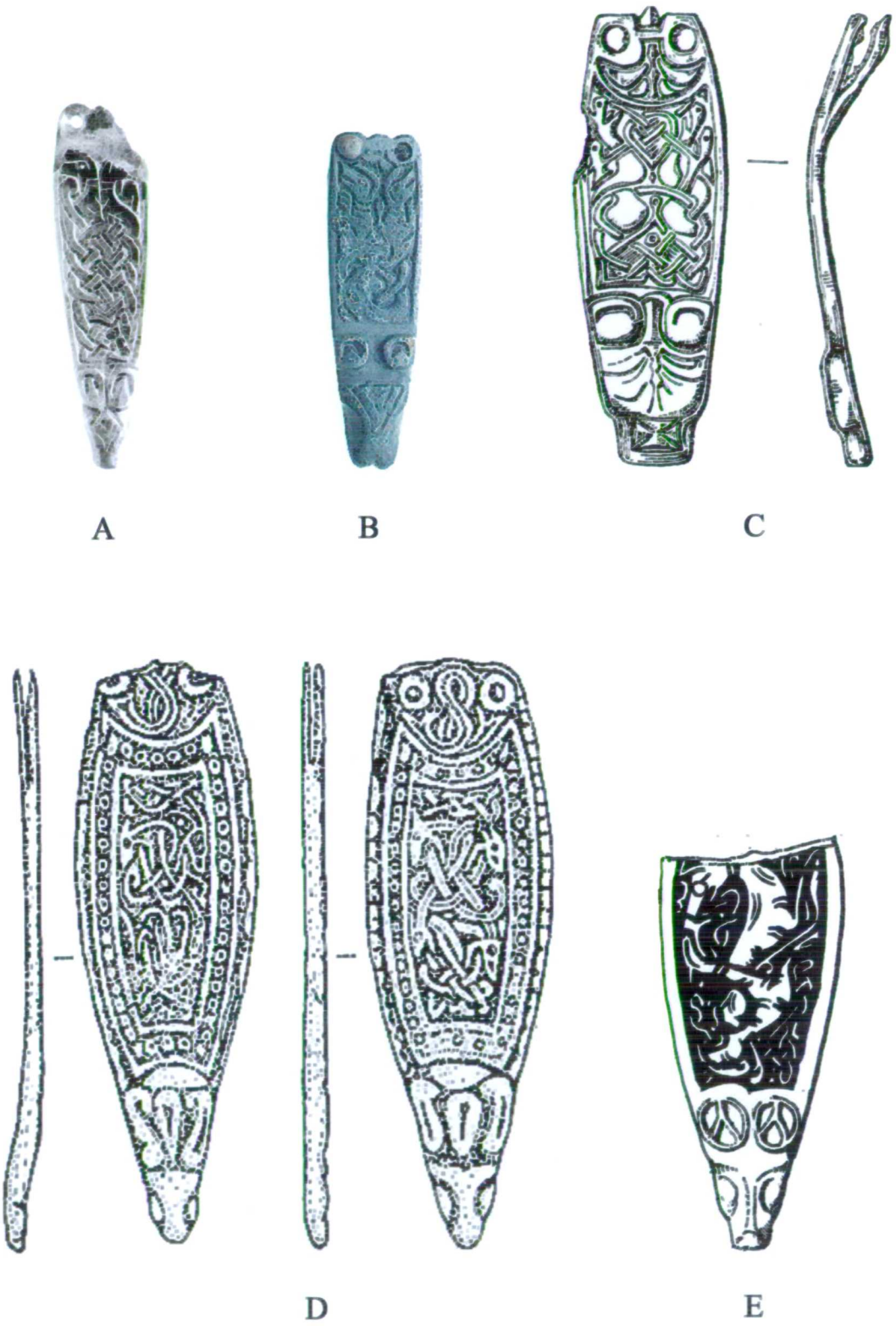


Fig. 3. 8: Strap-ends of Group A1a, xiv

A: cat. no. 414; B: cat. no. 415; C: cat. no. 416
D: cat. no. 417; E: cat. no. 418
Scale 1.5: 1

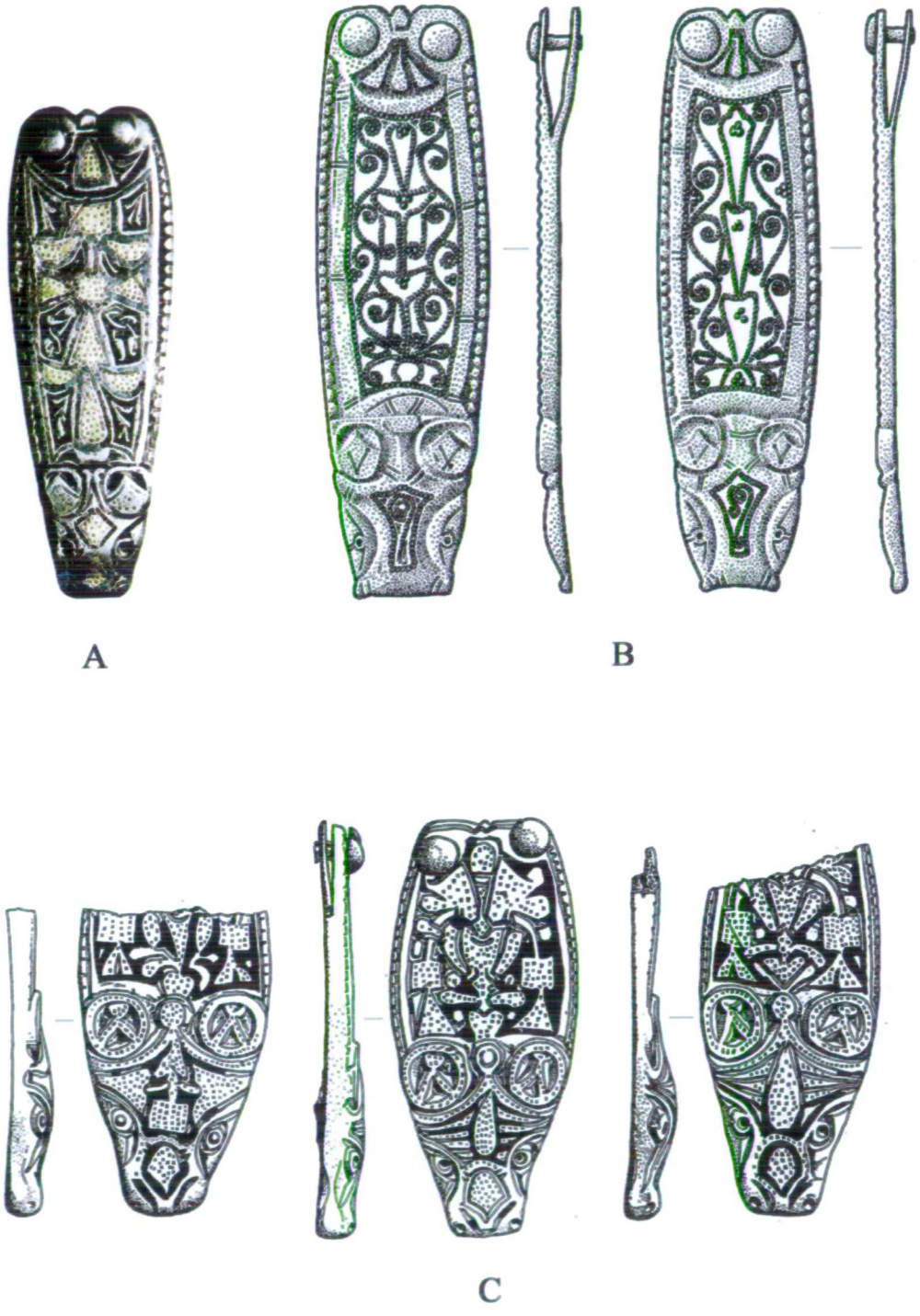


Fig. 3. 9: Strap-ends of Group A1a, xv

A: cat. no. 421; B: cat. no. 430
C: cat. no. 426
Scale 1.5: 1

Fig. 3. 10: Strap-ends of Groups A1a, xv, xvi & xvii

A: cat. no. 431; B: cat. no. 432; C: cat. no. 440
D: cat. no. 441; E: cat. no. 444; F: cat. no. 445
Scale 1.5: 1

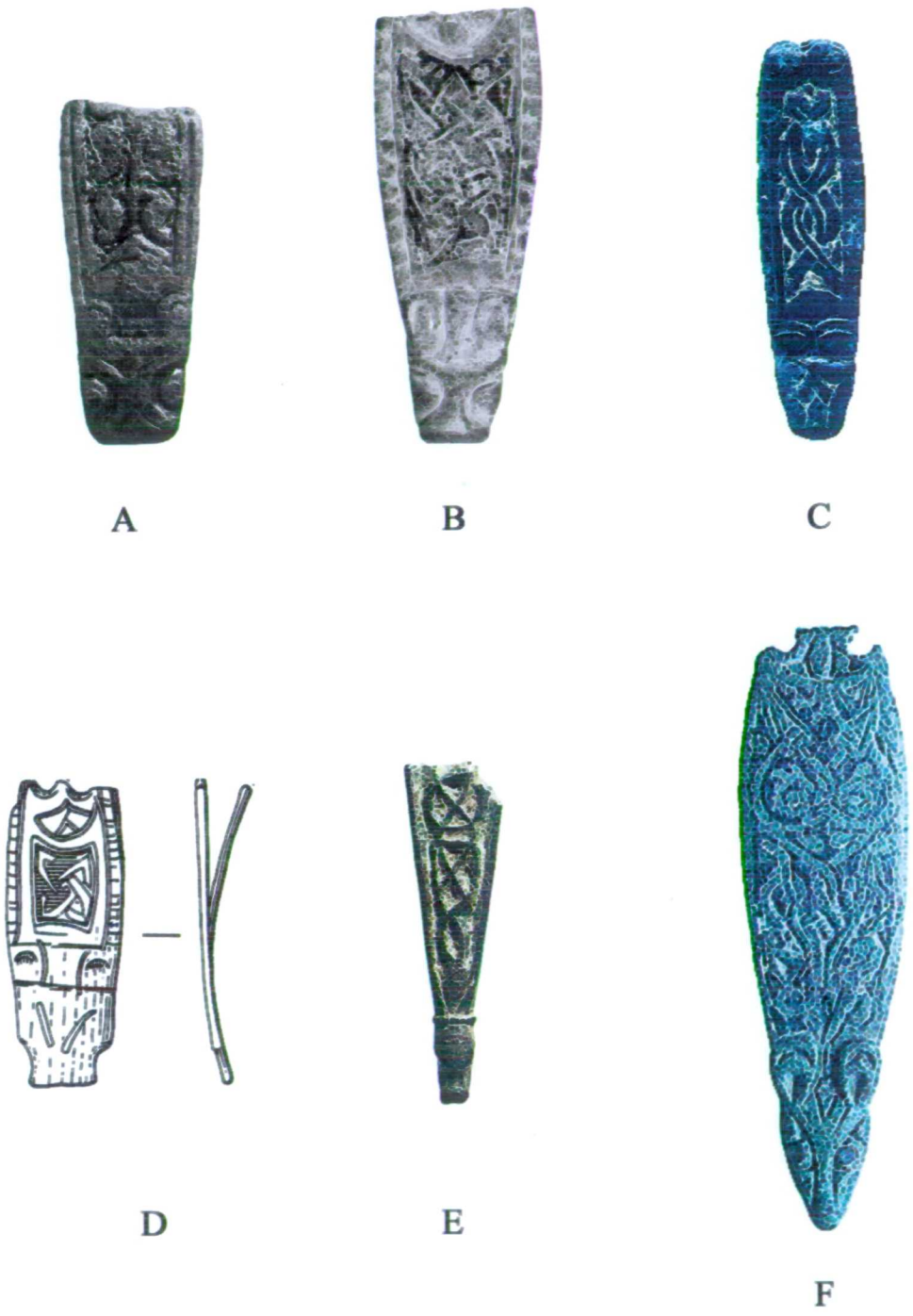


Fig. 3. 11: Strap-ends of Groups A1a, xviii, xix & xx

A: cat. no. 447; B: cat. no. 461; C: cat. no. 462
D: cat. no. 475; E: cat. no. 477; F: cat. no. 478
Scale 1.5: 1

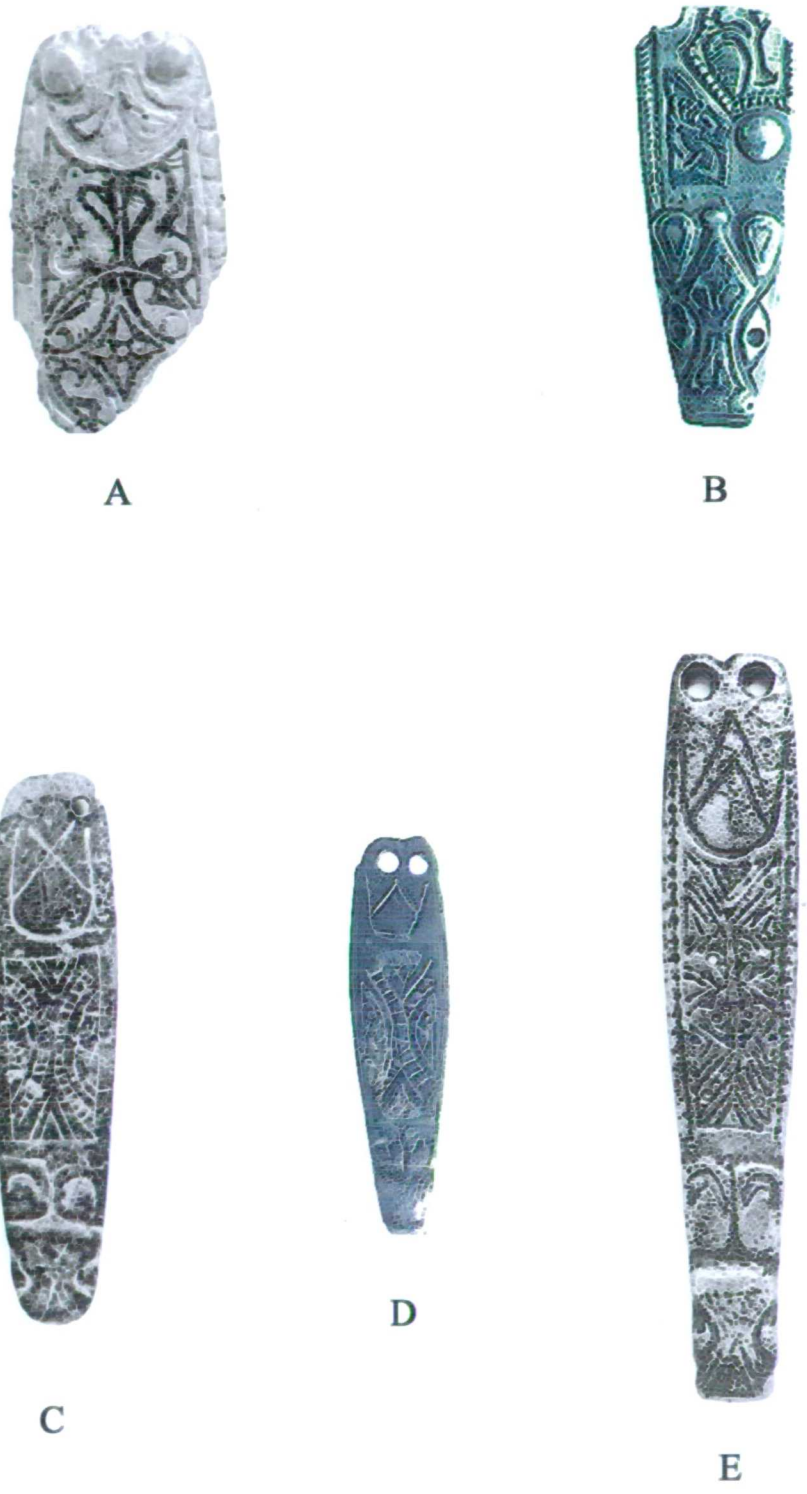


Fig. 3. 12: Strap-ends of Sub-type A1b and Group A1b, i

A: cat. no. 484; B: cat. no. 486, Scale 2: 1
C: cat. no. 491; D: cat. no. 502; E: cat. no. 519, Scale 1.5: 1

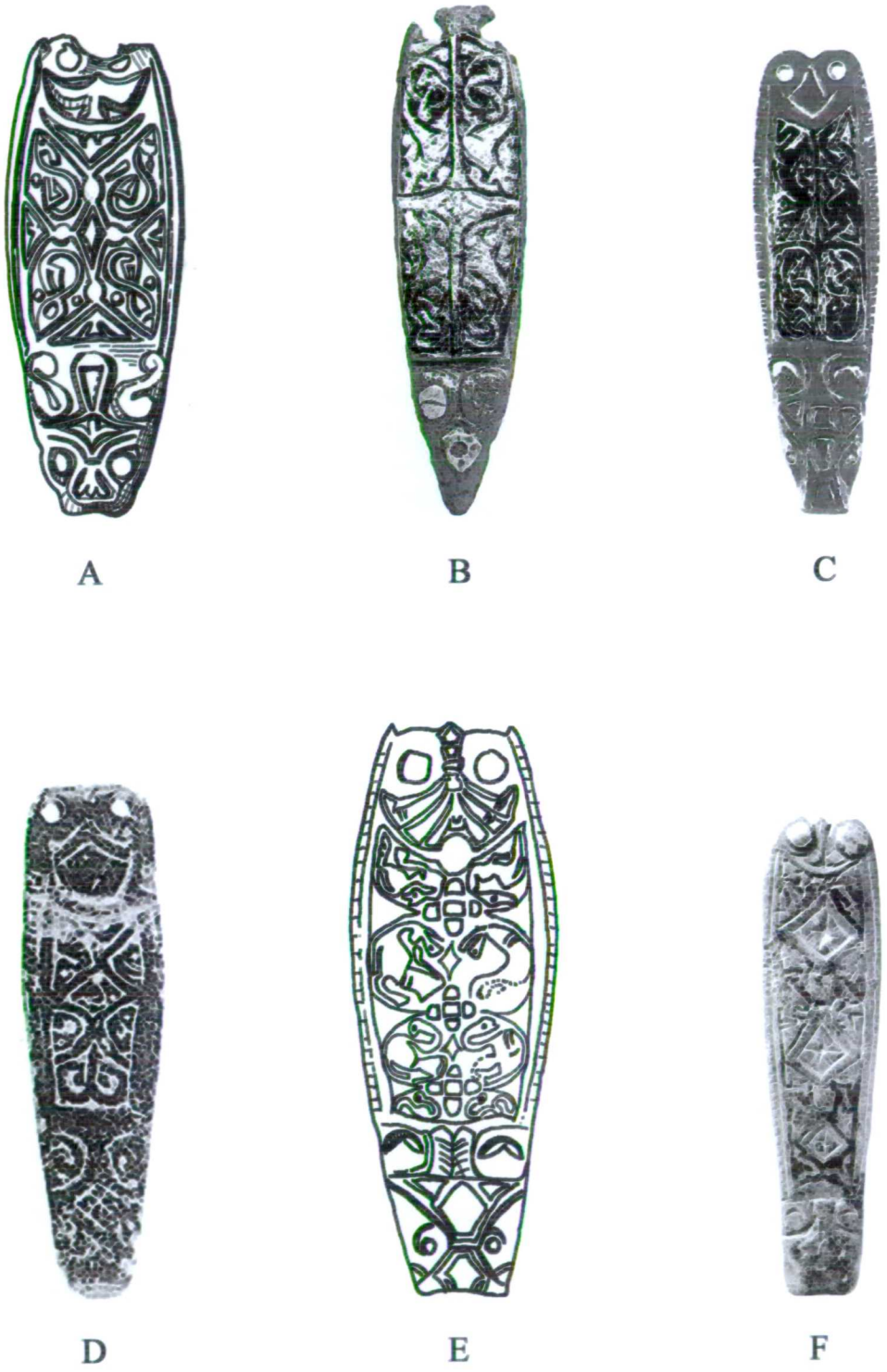


Fig. 3.13: Strap-ends of Groups A1b, ii & iii

A: cat. no. 529; B: cat. no. 536; C: cat. no. 537
D: cat. no. 550; E: cat. no. 551; F: cat. no. 554
Scale 1.5: 1

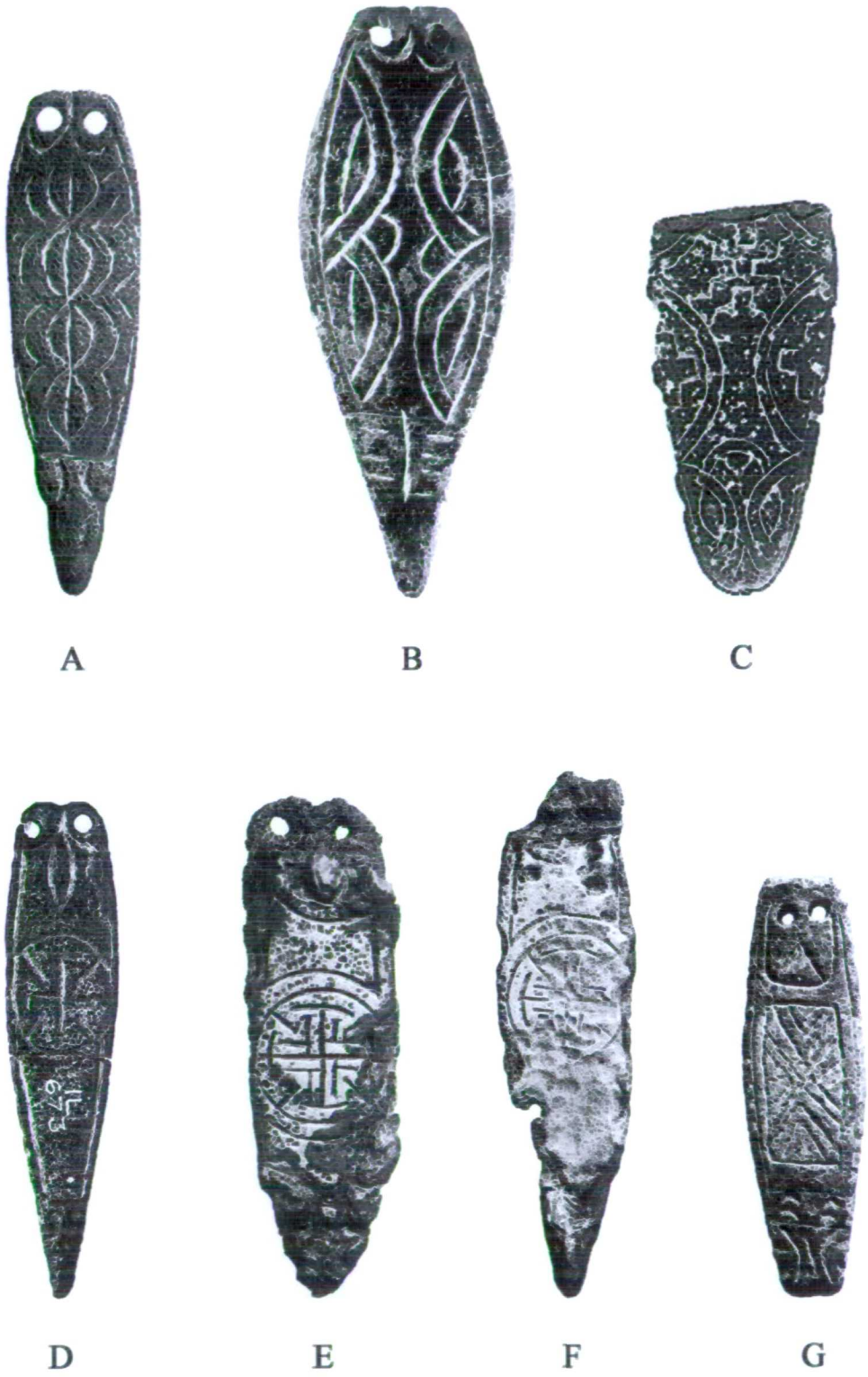


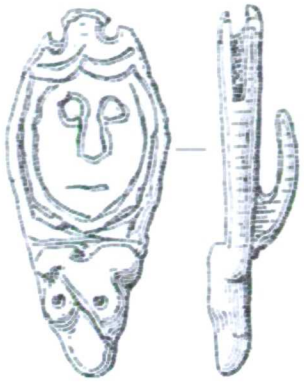
Fig. 3.14: Strap-ends of Sub-types A2 a, b & c

A: cat. no. 582; B: cat. no. 598; C: cat. no. 612
D: cat. no. 613; E: cat. no. 615; F: cat. no. 616; G: cat. no. 617
Scale 1.5: 1

Fig. 3. 15: Strap-ends of Sub-types A2 d, e, f, h & i

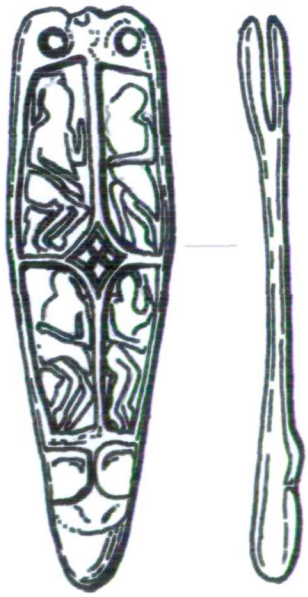
A: cat. no. 634, Scale 1:1; B: cat. no. 648; C: cat. no. 649
D: cat. no. 659; E: cat. no. 713; F: cat. no. 724; G: cat. no. 725
Scale 1.5: 1

A



B

C



D

E

Fig. 3. 16: Strap-ends of Type A3

A: cat. no. 727; B: cat. no. 729
C: cat. no. 730; D: cat. no. 731; E: cat. no. 732
Scale 1.5: 1

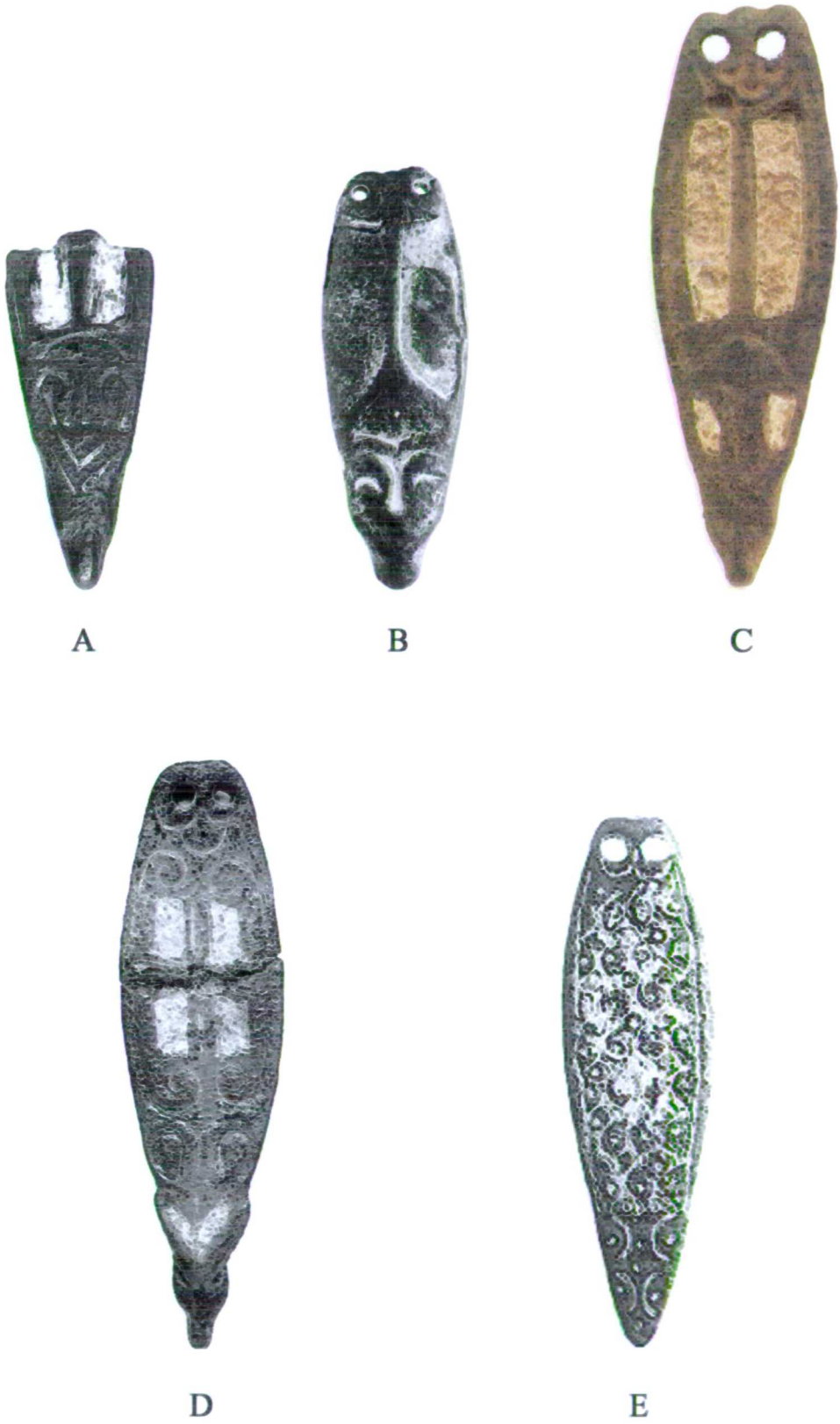


Fig. 3. 17: Strap-ends of Type A4, including Sub-types A4 b, c & d

A: cat. no. 747; B: cat. no. 765; C: cat. no. 766
D: cat. no. 771; E: cat. no. 773
Scale 1.5: 1

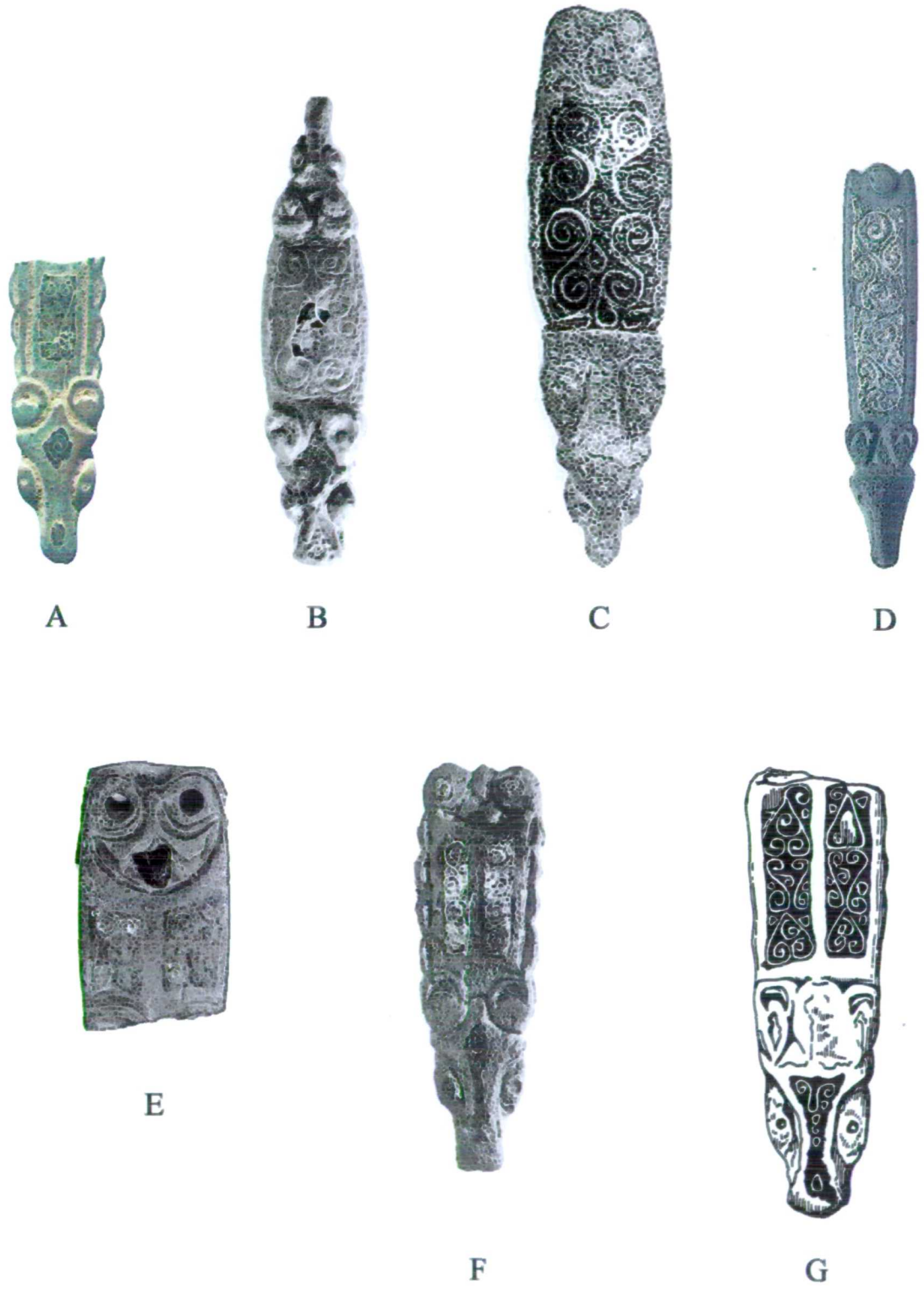


Fig. 3. 18: Strap-ends of Type A5, including Sub-types A5 a & b

A: cat. no. 788; B: cat. no. 794; C: cat. no. 807; D: cat. no. 810
E: cat. no. 827, Scale 2: 1; F: cat. no. 841; G: cat. no. 850
Scale 1.5: 1

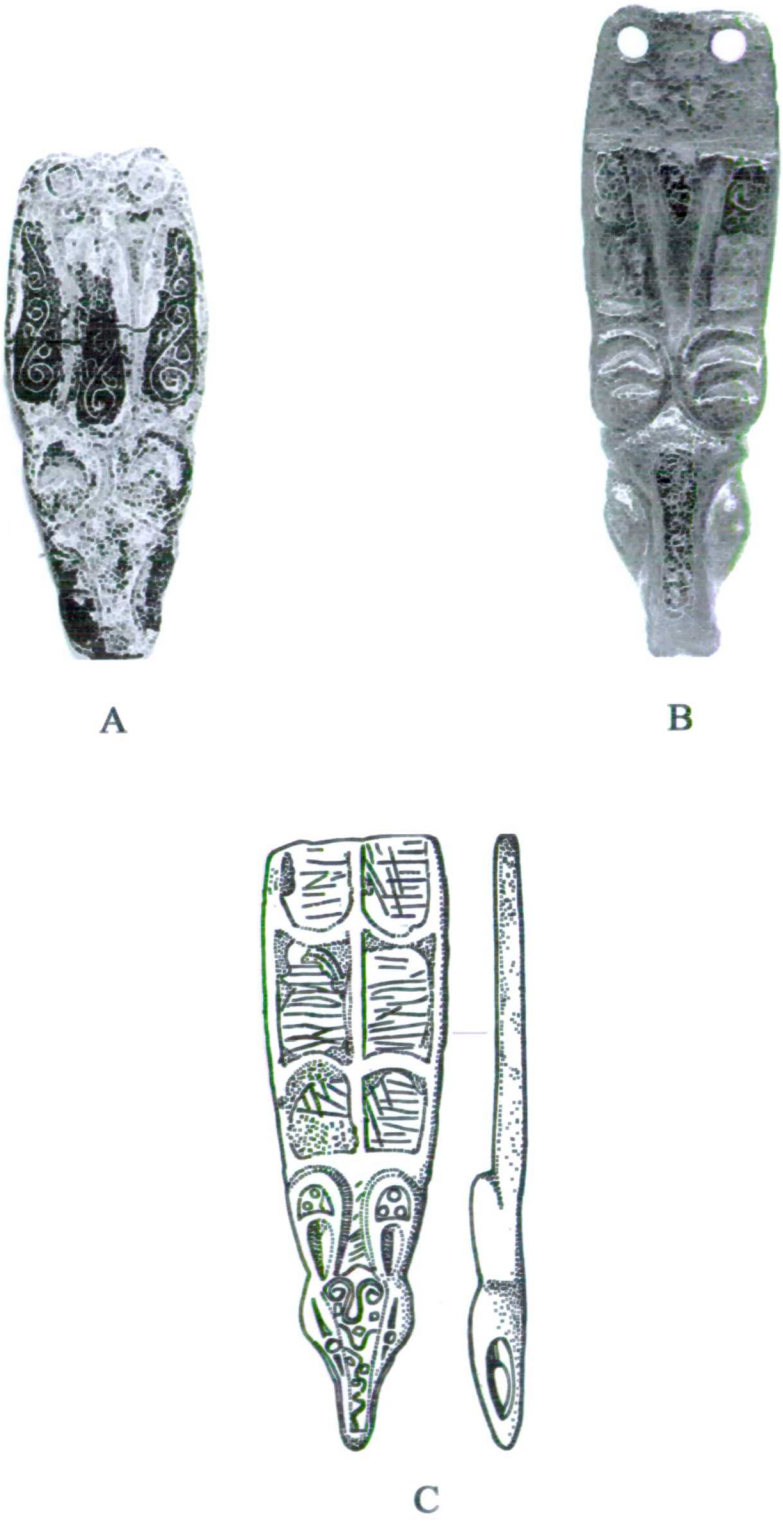


Fig. 3. 19: Strap-ends of Sub-types A5 c & d

A: cat. no. 855; B: cat. no. 868, Scale 2: 1
C: cat. no. 871, Scale 1.5: 1

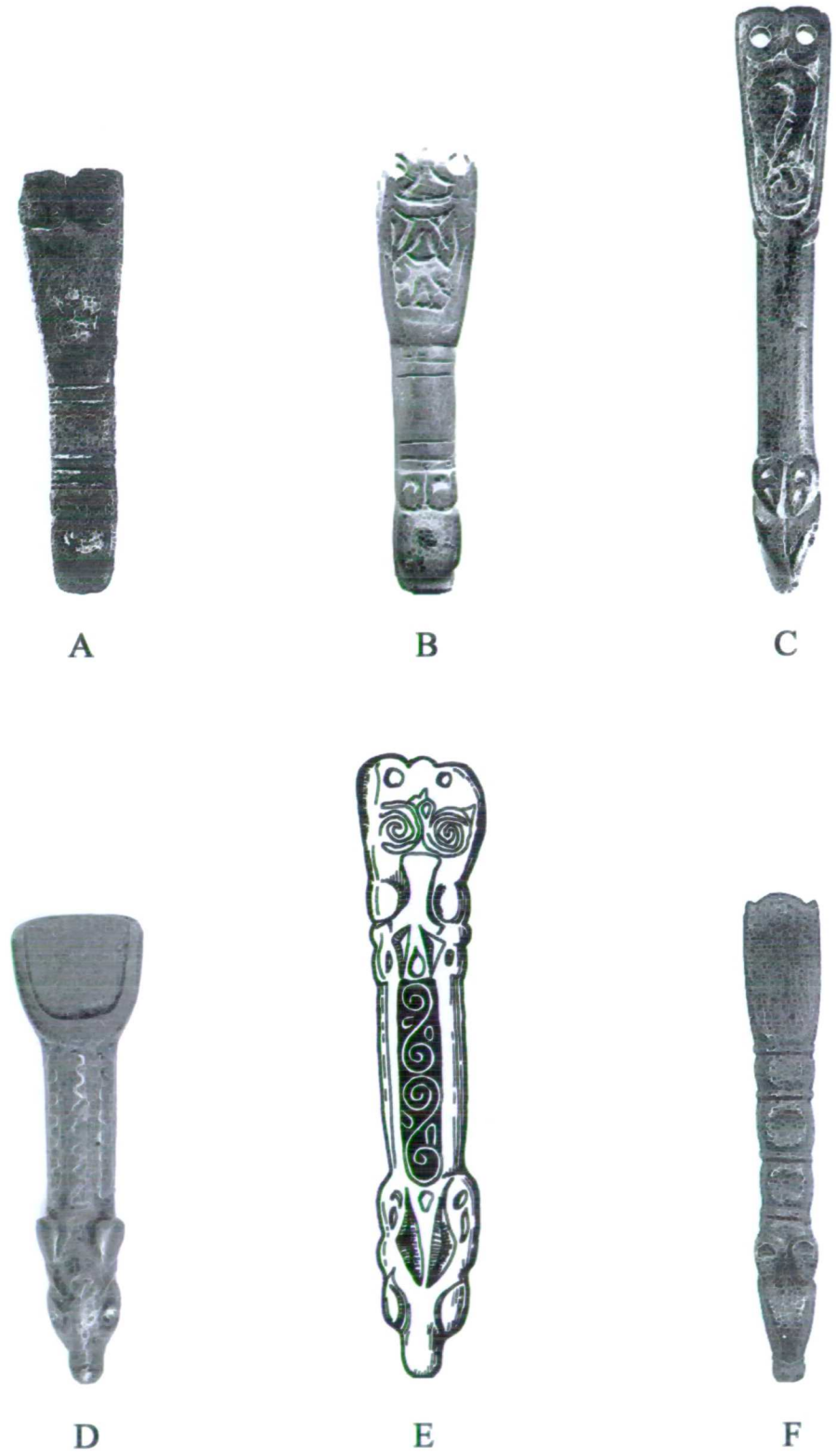


Fig. 3. 20: Strap-ends of Class B, including (stereotyped), Types B1, 2 & 3

A: cat. no. 918; B: cat. no. 973; C: cat. no. 980
D: cat. no. 983; E: cat. no. 985 ; F: cat. no. 990
Scale 1.5: 1

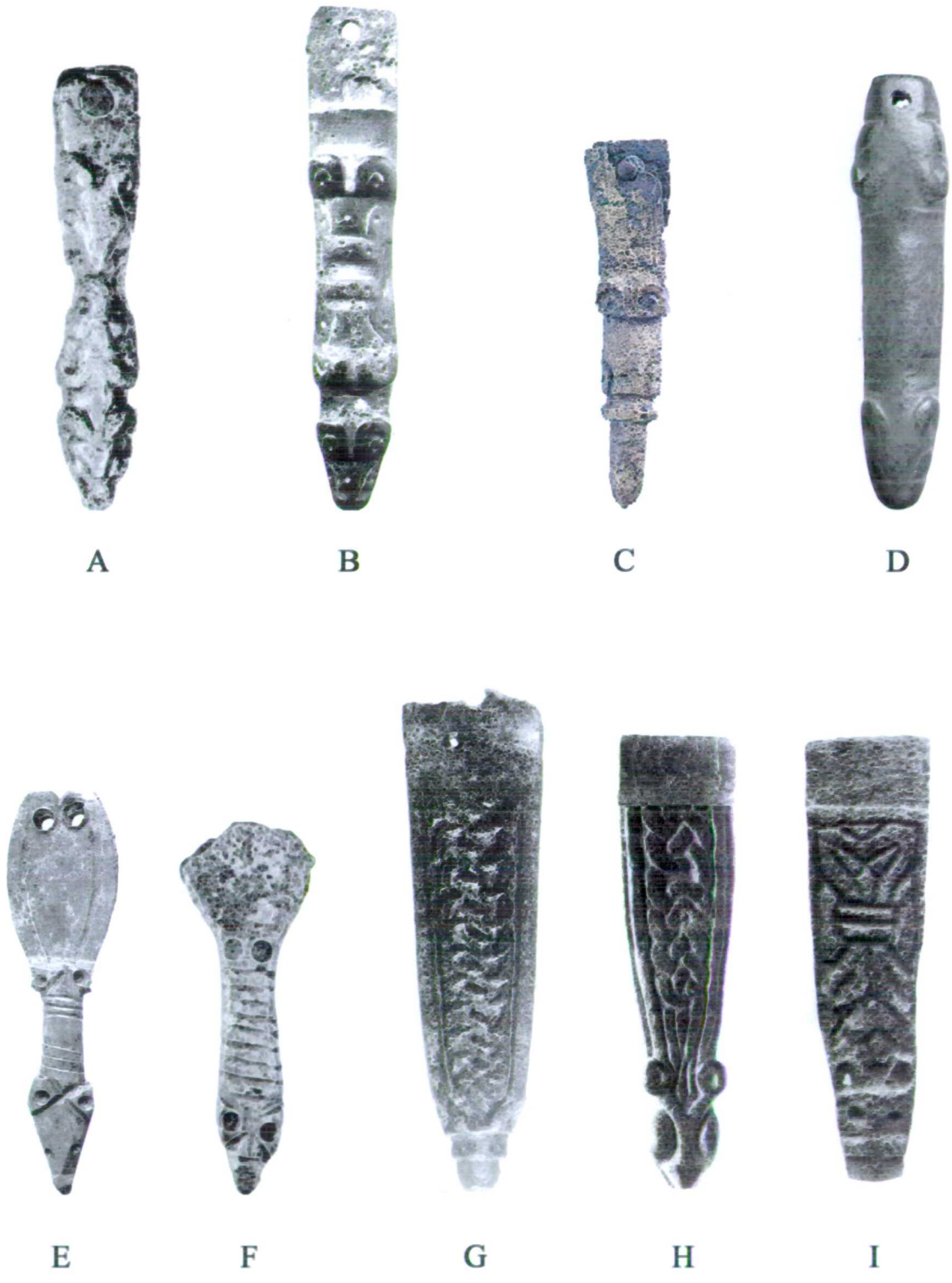


Fig. 3. 21: Strap-ends of Sub-types B4, a, b, c & d, and Type B5

A: cat. no. 1005; B: cat. no. 1009; C: cat. no. 1011;D: cat. no. 1015
E: cat. no. 1017; F: cat. no. 1019; G: cat. no. 1031; H: cat. no. 1033; I: cat. no. 1034
Scale 1.5: 1

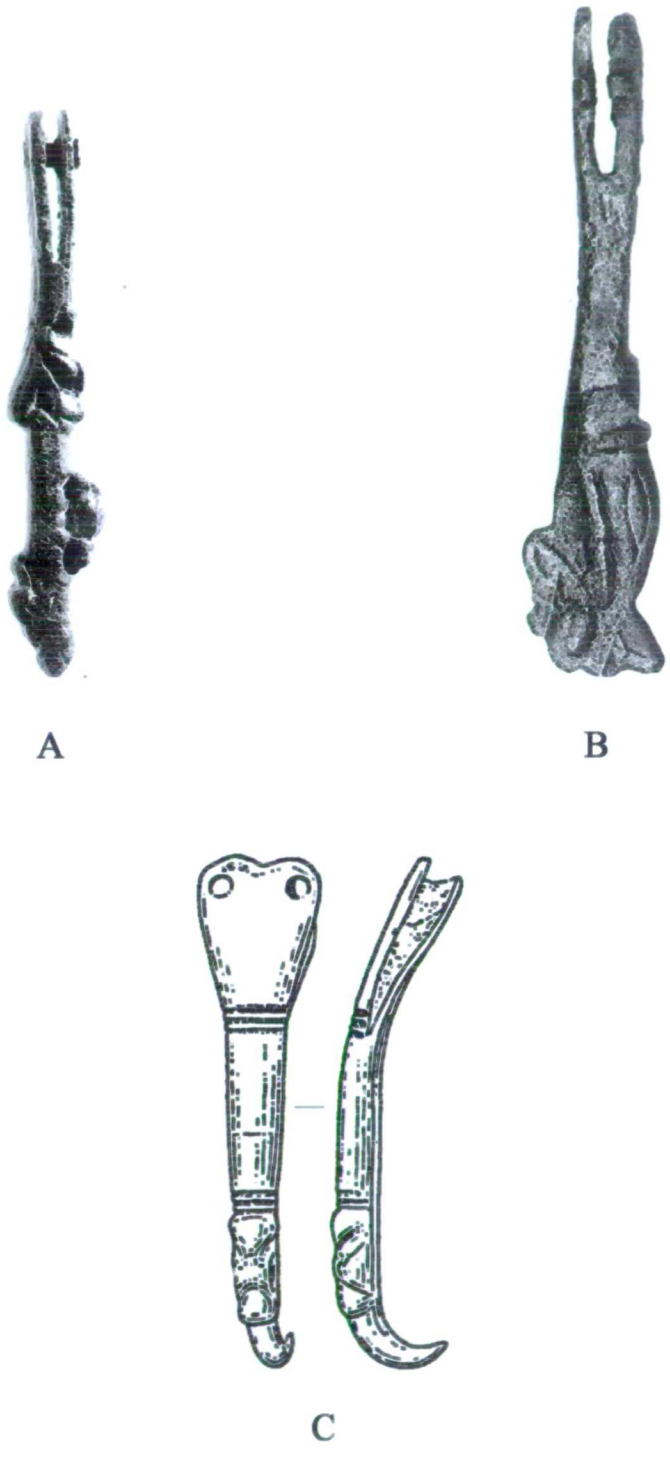
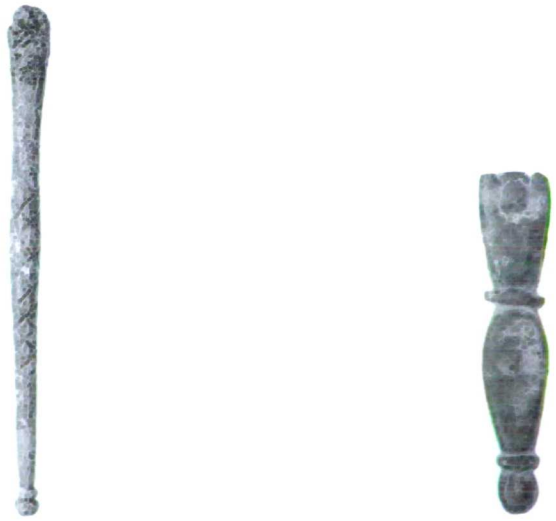


Fig. 3. 22: Strap-ends of Types B 6 & 7

A: cat. no. 1037; B: cat. no. 1039, side views
C: cat. no. 1042
Scale 1.5: 1

A



B C

Fig. 3. 23: Strap-ends of Classes C & D

A: cat. nos 1051, 1055, 1056, 1058, 1059, 1054, 1052 & 1047
B: cat. no. 1061; C: cat. no. 1073
Scale 1.5: 1

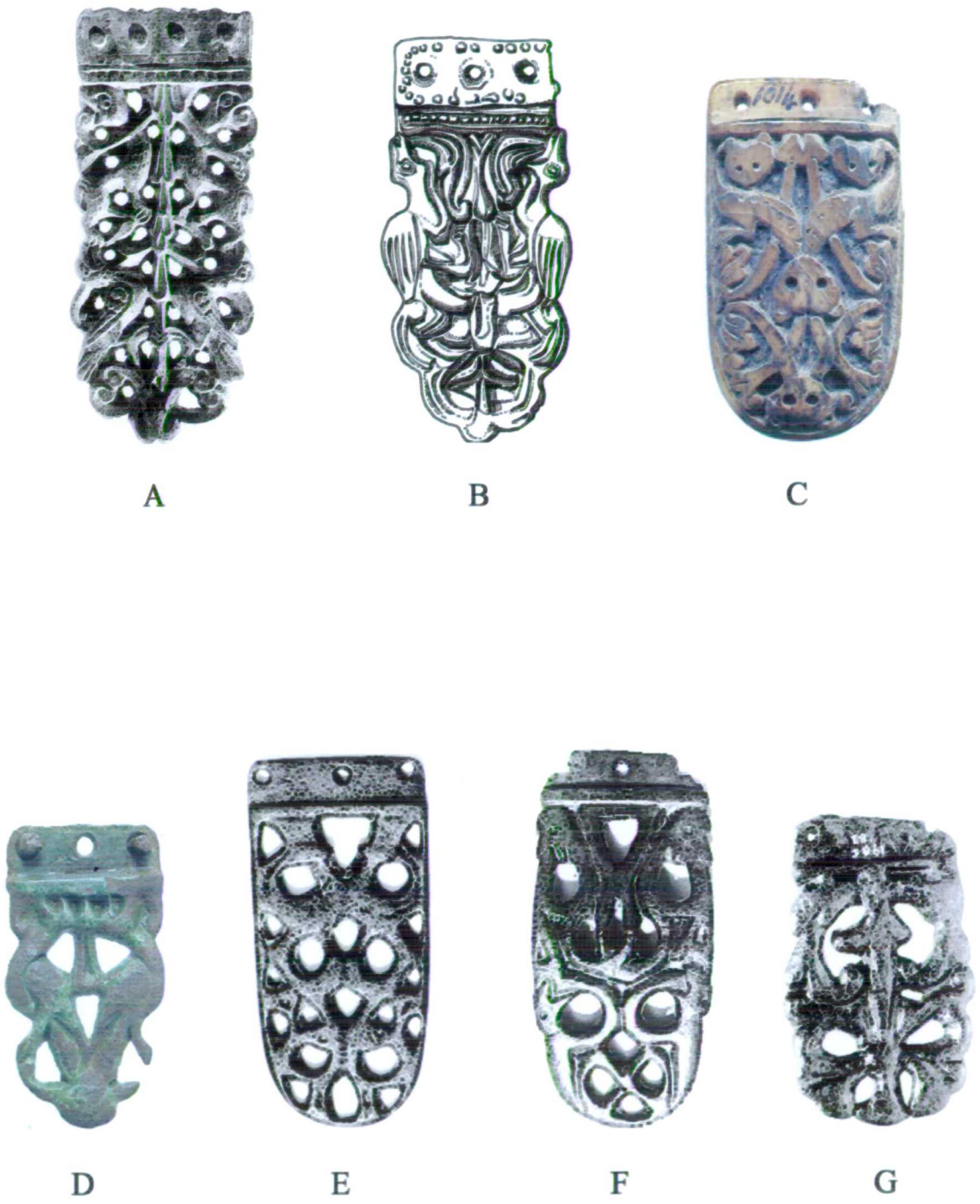


Fig. 3. 24: Strap-ends of Group E1a, i

A: cat. no. 1122; B: cat. no. 1123; C: cat. no. 1125
D: cat. no. 1126; E: cat. no. 1133; F: cat. no. 1136; G: cat. no. 1139
Scale 1: 1

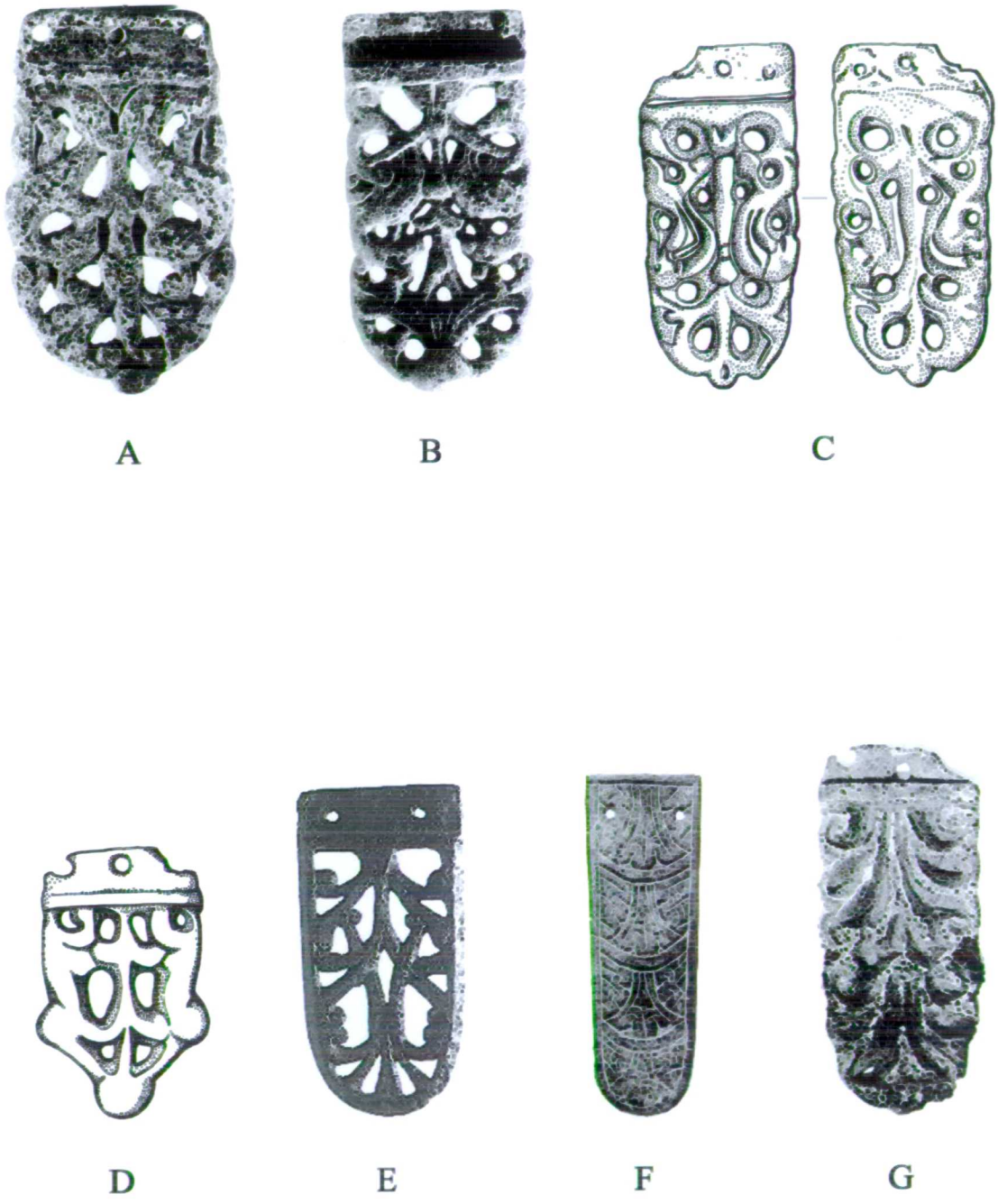


Fig. 3. 25: Strap-ends of Group E1a, ii & Sub-type E1 b

A: cat. no. 1141; B: cat. no. 1142; C: cat. no. 1143
D: cat. no. 1150; E: cat. no. 1157; F: cat. no. 1160; G: cat. no. 1165
Scale 1: 1

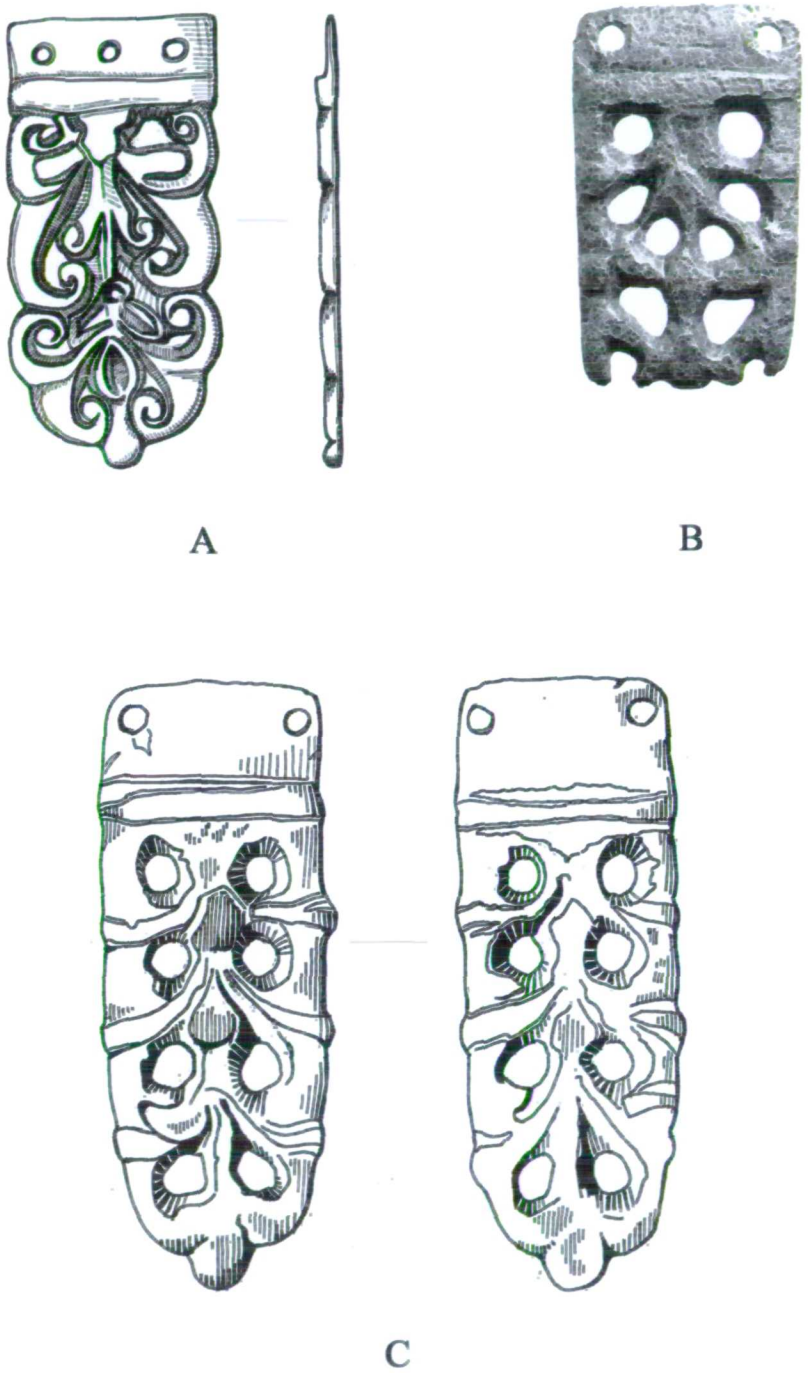


Fig. 3. 26: Strap-ends of Sub-types E1 b & c

A: cat. no. 1169; B: cat. no. 1183
C: cat. no. 1188
Scale 1: 1.5

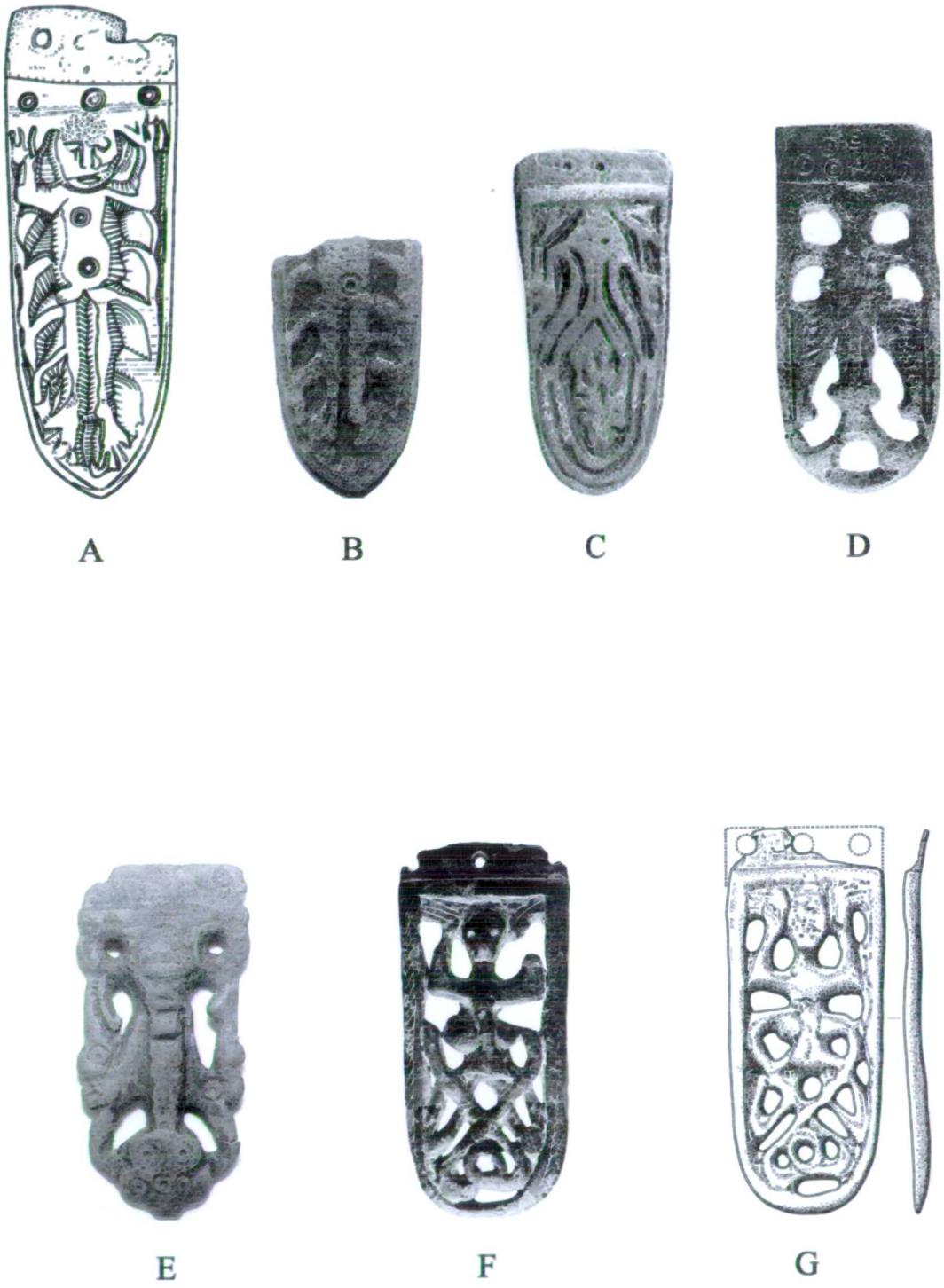
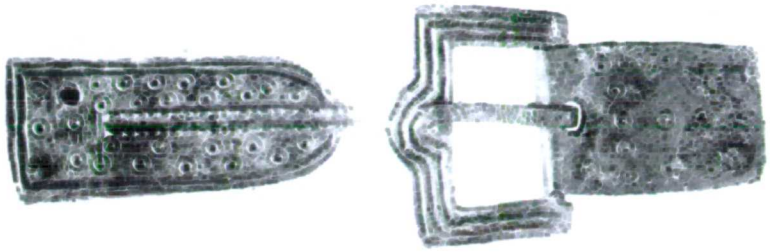


Fig. 3. 27: Strap-ends of Groups E2a, i, ii & E2b, i, ii & iii

A: cat. no. 1201; B: cat. no. 1203; C: cat. no. 1205, Scale 1.5: 1;
D: cat. no. 1216, Scale 1: 1
E: cat. no. 1223; F: cat. no. 1224; G: cat. no. 1225, Scale 1: 1



A

B C

Fig. 3. 28: Strap-ends of Type E3

A: cat. no. 1229 (with matching buckle), Scale 1: 1
B: cat. no. 1234; C: cat. no. 1237, Scale 1.5: 1

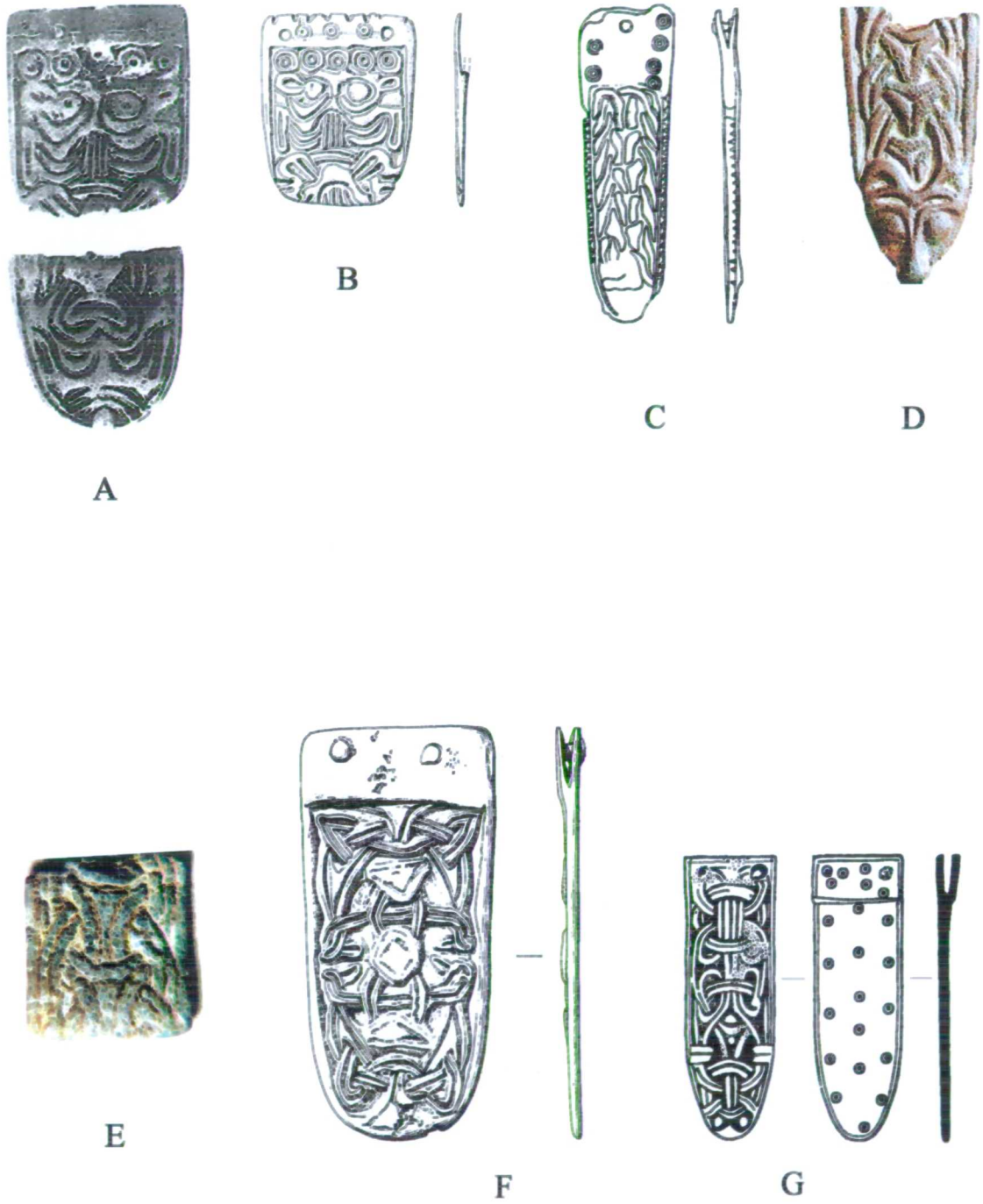


Fig. 3. 29: Strap-ends of Sub-types E4 a, b & c

A: cat. no. 1244; B: cat. no. 1246; C: 1248; D: 1249
E: cat. no. 1250, Scale 2: 1; F: cat. no.1256 ; G: cat. no.1257
Scale 1: 1

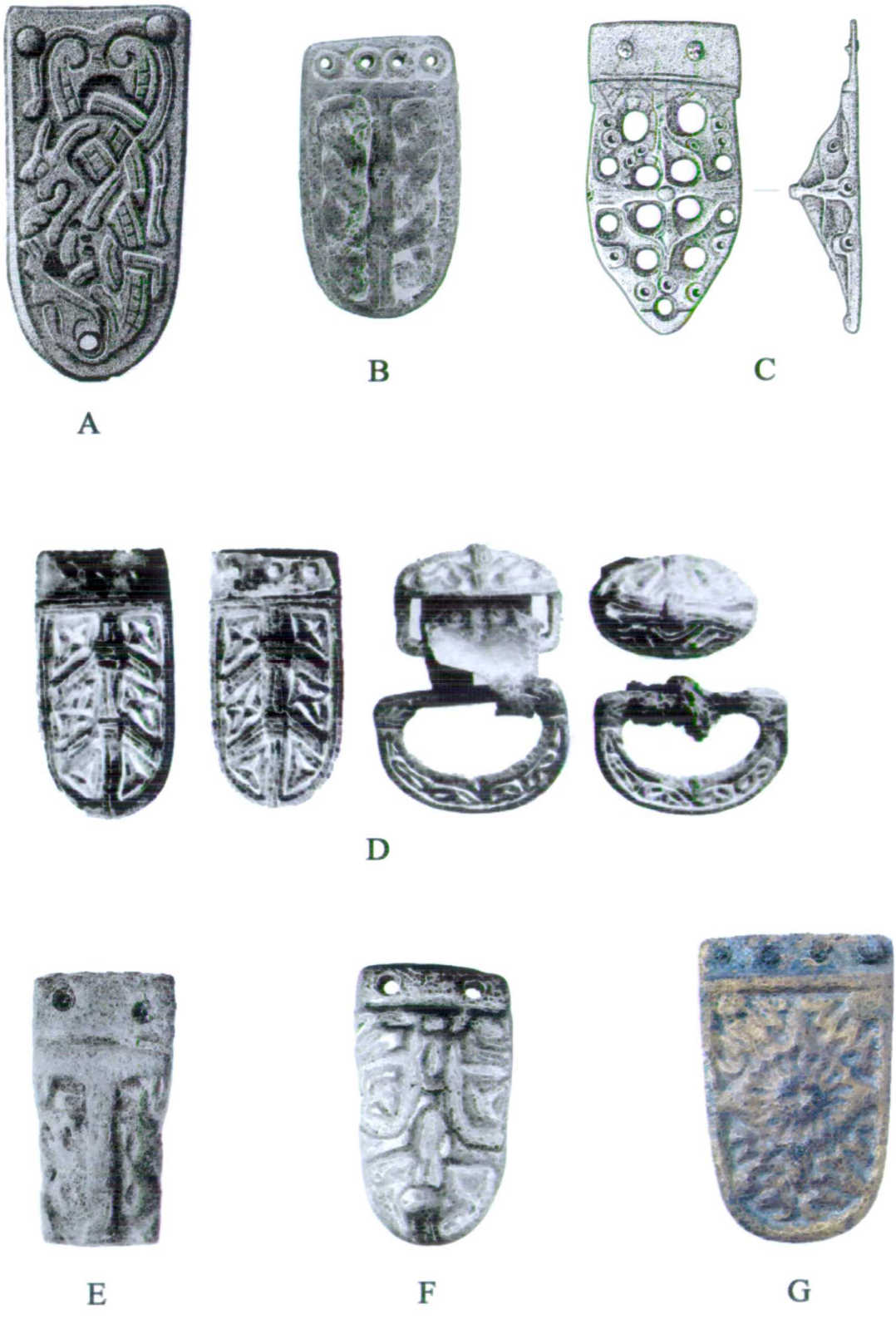


Fig. 3. 30: Strap-ends of Types E5 & 6

A: cat. no. 1258, Scale 1.5: 1; B: cat. no. 1262; C: cat. no. 1272; Scale 1: 1
D: cat. no. 1280 (with matching buckles & slides), Scale 1: 1
E: cat. no. 1285; F: cat. no. 1294, Scale 1.5: 1; G: cat. no. 1295, Scale 1: 1

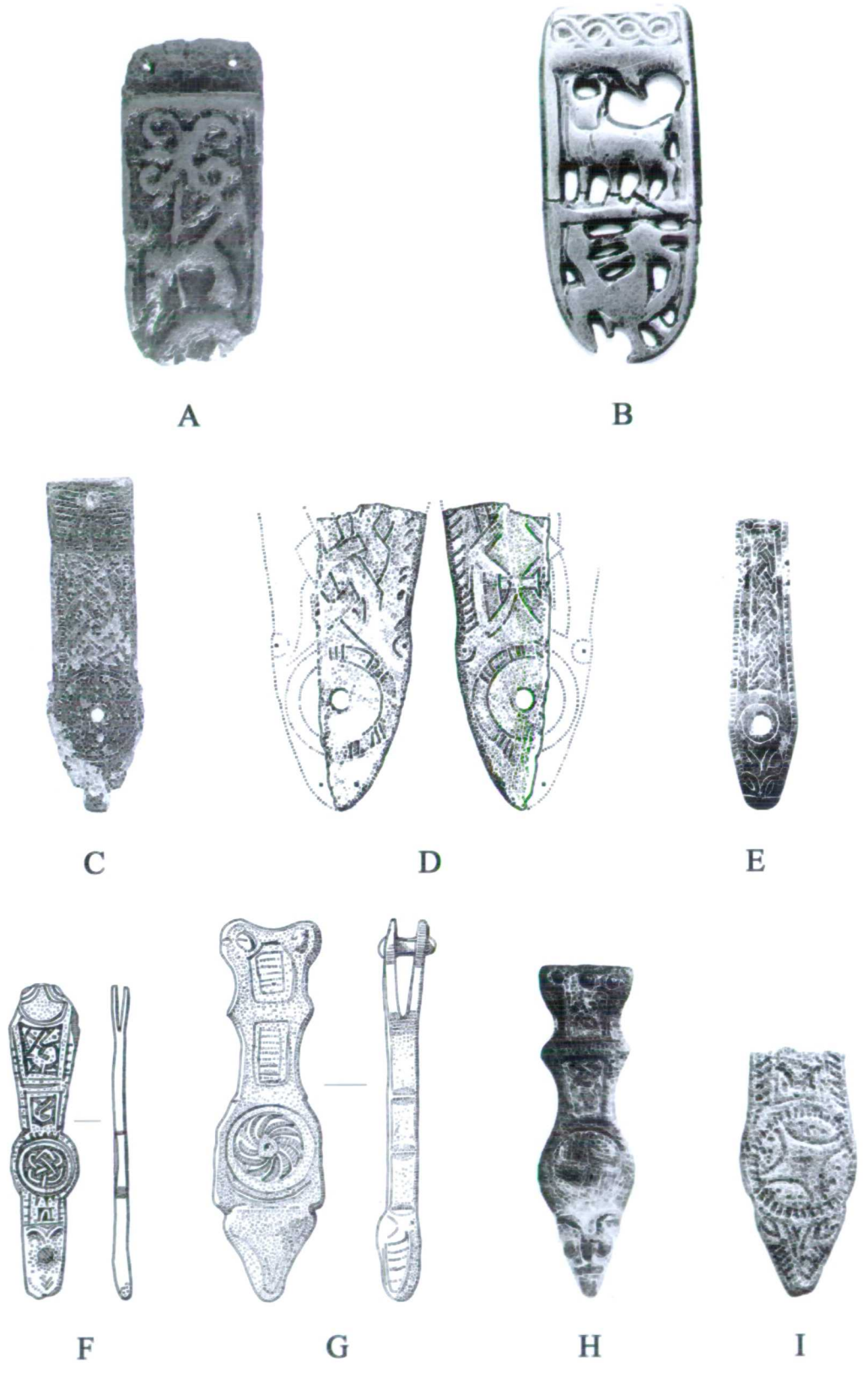


Fig. 3. 31: Strap-ends of Type E7 & Class F

A: cat. no. 1297; B: cat. no. 1299, Scale 1: 1
C: cat. no. 1303, Scale 1: 1, D: cat. no. 1306, Scale 1.5: 1; E: cat. no. 1308, Scale 1: 1
F: cat. no. 1310; G: cat. no. 1311; H: cat. no. 1312, Scale 1: 1; I: cat. no. 1313, Scale 1.5: 1

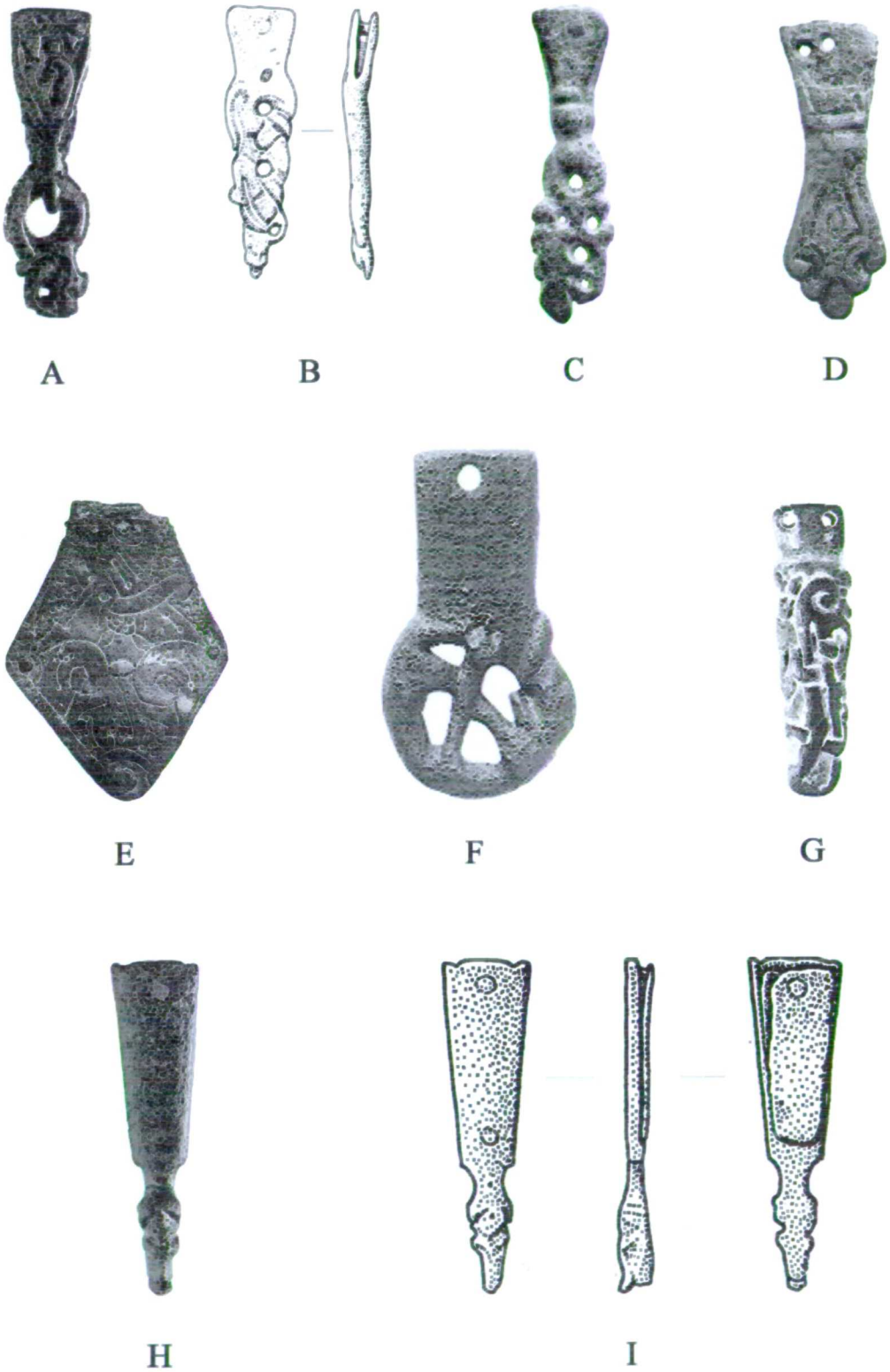
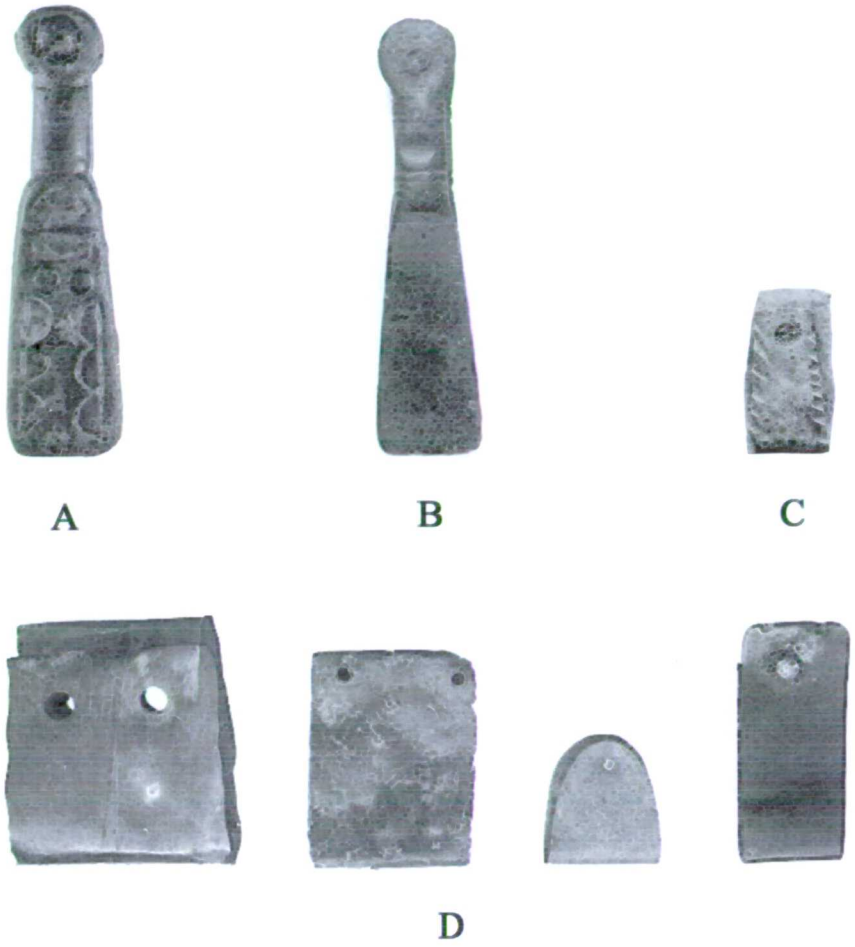


Fig. 3. 32: Strap-ends of Classes G, H & I

A: cat. no. 1314; B: cat. no. 1322; C: cat. no. 1323; D: cat. no. 1324, Scale 1: 1
E: cat. no. 1326, Scale 1: 1; F: cat. no. 1327, Scale 1.5: 1; G: cat. no. 1328, Scale 1: 1
H: cat. no. 1331; I: cat. no. 1335, Scale 1: 1



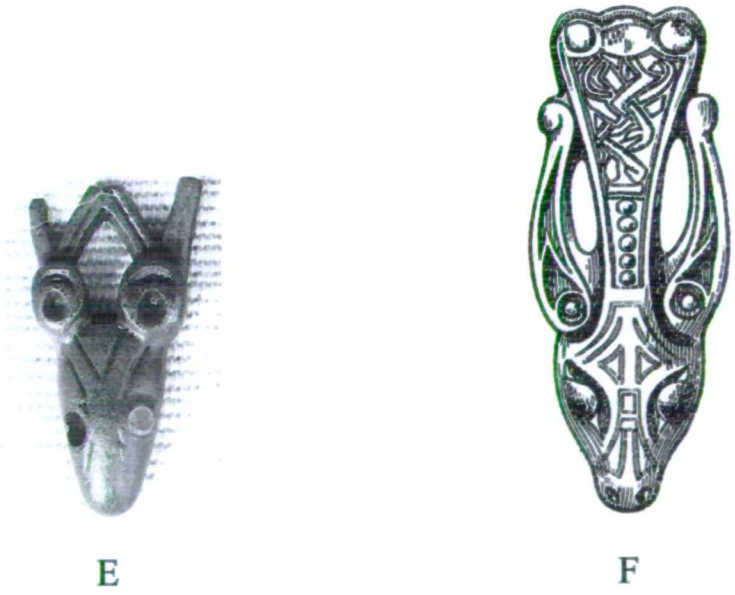


Fig. 3. 33: Strap-ends of Classes J & K

A: cat. no. 1337; B: cat. no. 1341; C: cat. no. 1358
D: cat. nos 1351, 1352, 1353 & 1350
E: cat. no. 1363; F: cat. no. 1365
Scale 1.5: 1

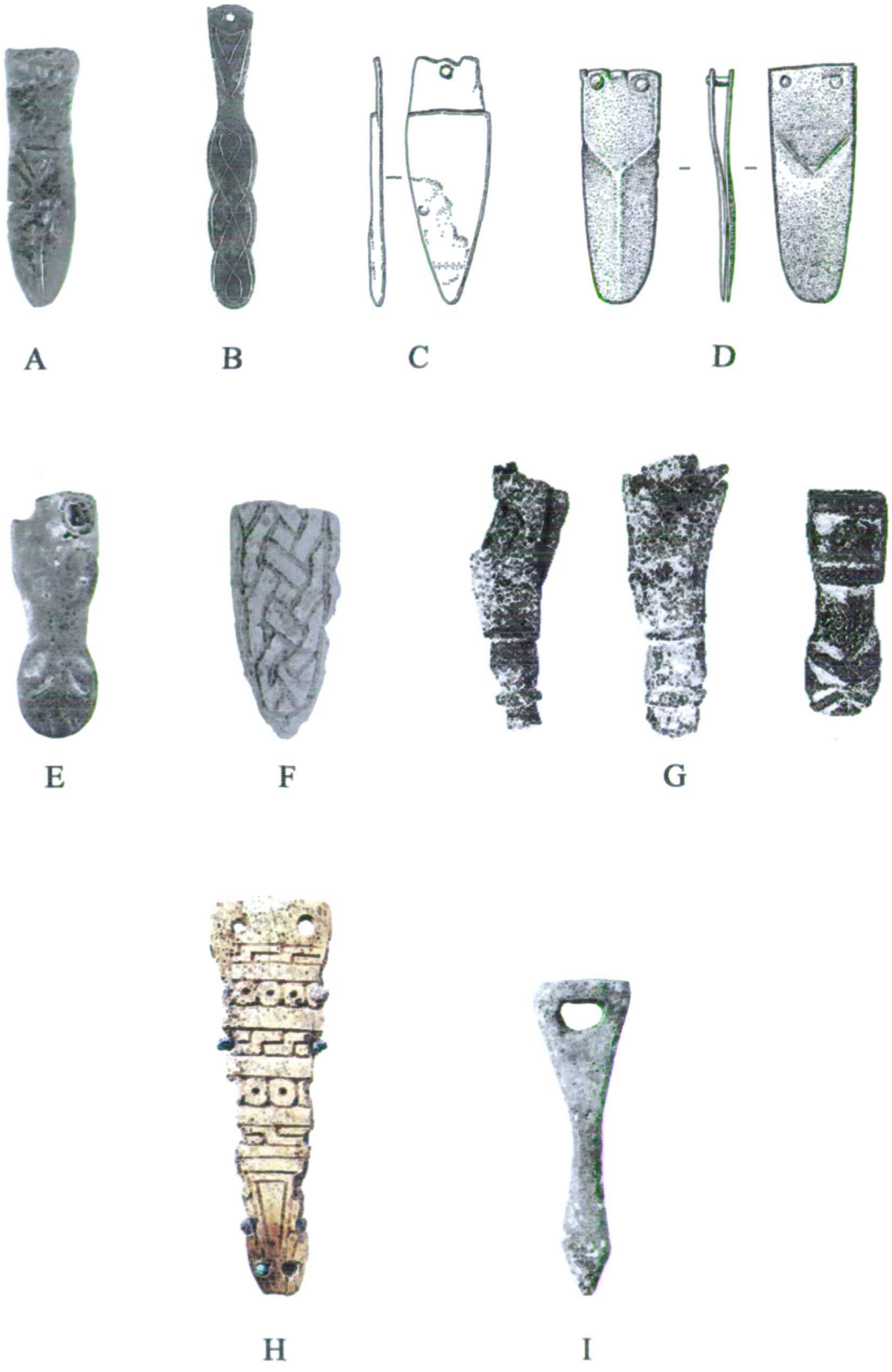


Fig. 3. 34: Strap-ends of Class L (Unclassified)

A: cat. no. 1368, Scale 1: 1; B: cat. no. 1369, Scale 2: 3; C: cat. no. 1370, Scale 1: 1
D: cat. no. 1371, Scale 1: 1
E: cat. no. 1372; F: cat. no. 1373; G: cat. nos 1375, 1376 & 1377, Scale 1: 1
H: cat. no. 1378, Scale 1: 1; I: cat. no. 1379, Scale 1.5: 1

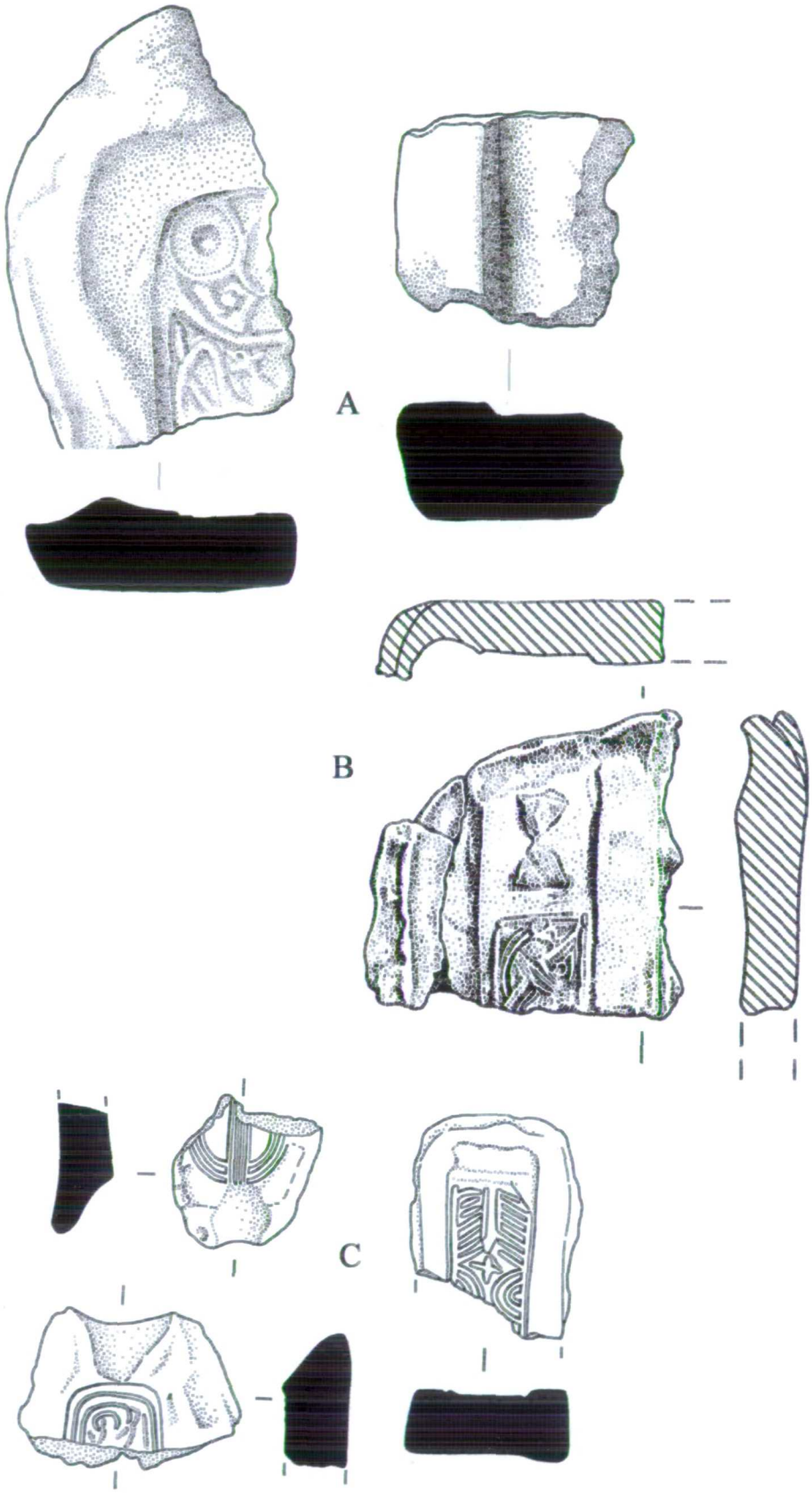
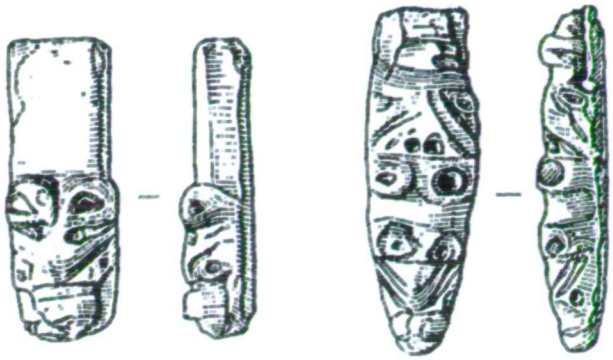
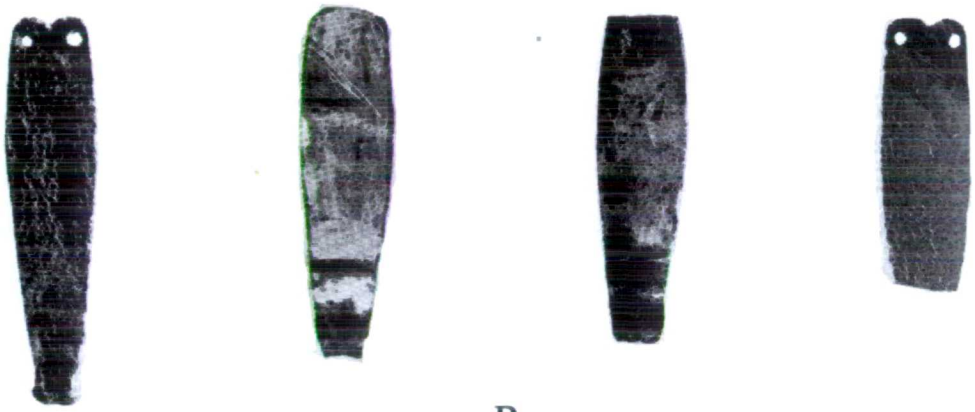


Fig. 5. 1: Clay moulds used in the manufacture of Late Saxon and Viking-age strap-ends

A: Carlisle, Scale 1.5: 1
B: Wharram Percy, Scale 1.5: 1
C: Buttermarket, Ipswich; Scale 2: 3



A



B

C

Fig. 5. 2: Evidence for the manufacture of Late Saxon and Viking-age strap-ends and cu-alloy rivets

A: Possible lead models or trial-pieces from Fingringhoe, Essex (cat. no. 993), Scale 1.5: 1
B: Series of unfinished Cu-alloy and Ag strap-ends from Sevington, Wilts (cat. nos 135-41), Scale 1: 1,
C: Cu-alloy bar for producing rivets, Baldock, Herts, Scale 1: 2

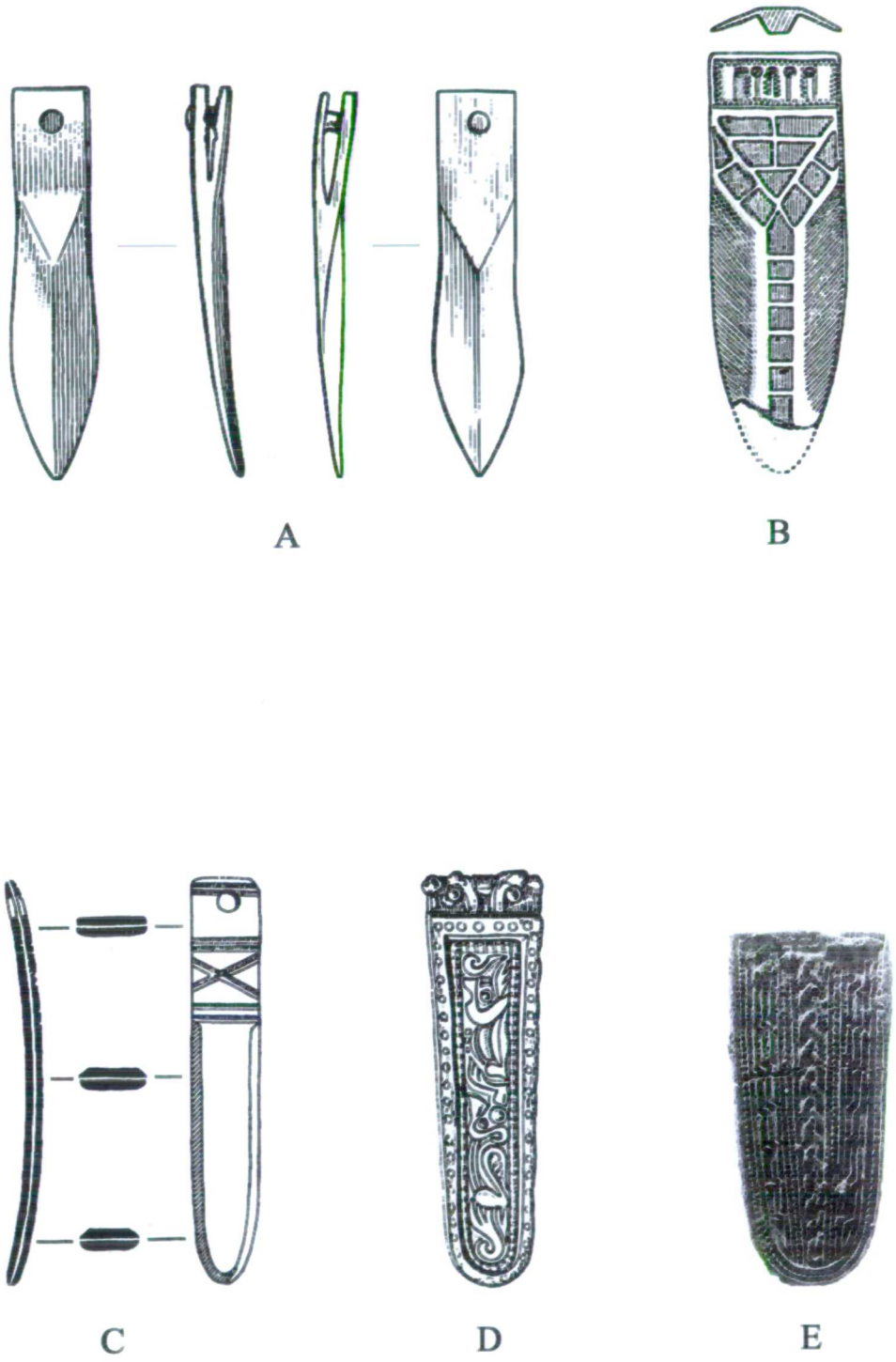


Fig. 6. 1: Strap-ends from the Early Saxon period

A: Buckland, Dover, Kent, Scale 1.5: 1; B: Faversham, Kent, Scale 1.5: 2
C: Dinas Powys, S. Glam., Wales, Scale 1.5: 1; D: Sarre, Kent; Scale 1: 1
E: Asthall, Oxon, Scale 1.5: 1

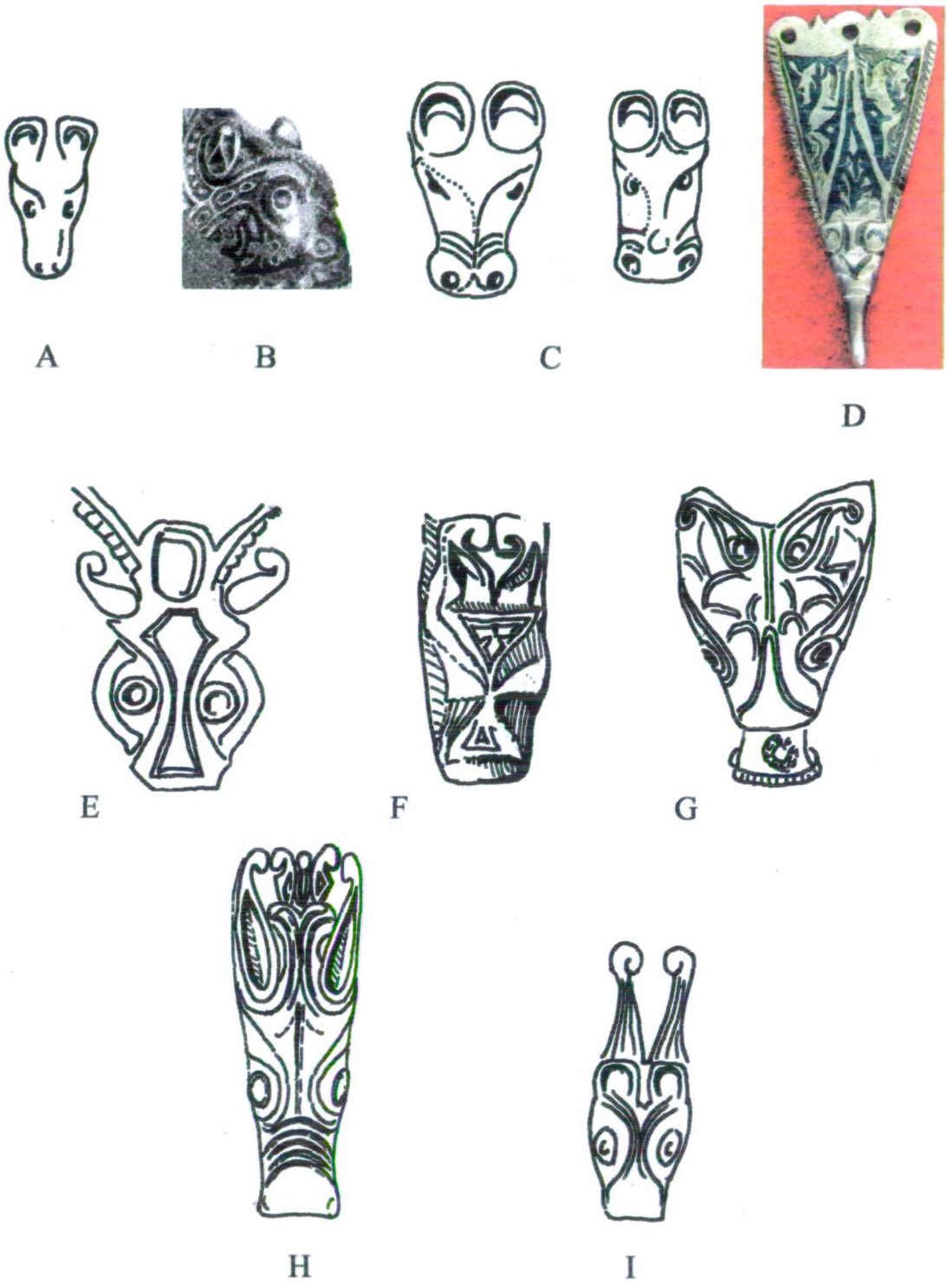


Fig. 6. 2: Comparison of animal heads used on Late Saxon ornamental metalwork and sculpture

A: Seal-die from Eye, Suffolk; B: 'Abingdon sword' pommel;
C: Terminals on a 'spur' from Pakenham, Suffolk; D: Hooked-tag from Kent
E: 'Strickland brooch'; F: 'Trewhiddle horn-mount' ; G: Alfred Jewel
H: Sculpture from Deerhurst, Gloucs; I: Censor cover from North Elmham, Norfolk
Not to Scale

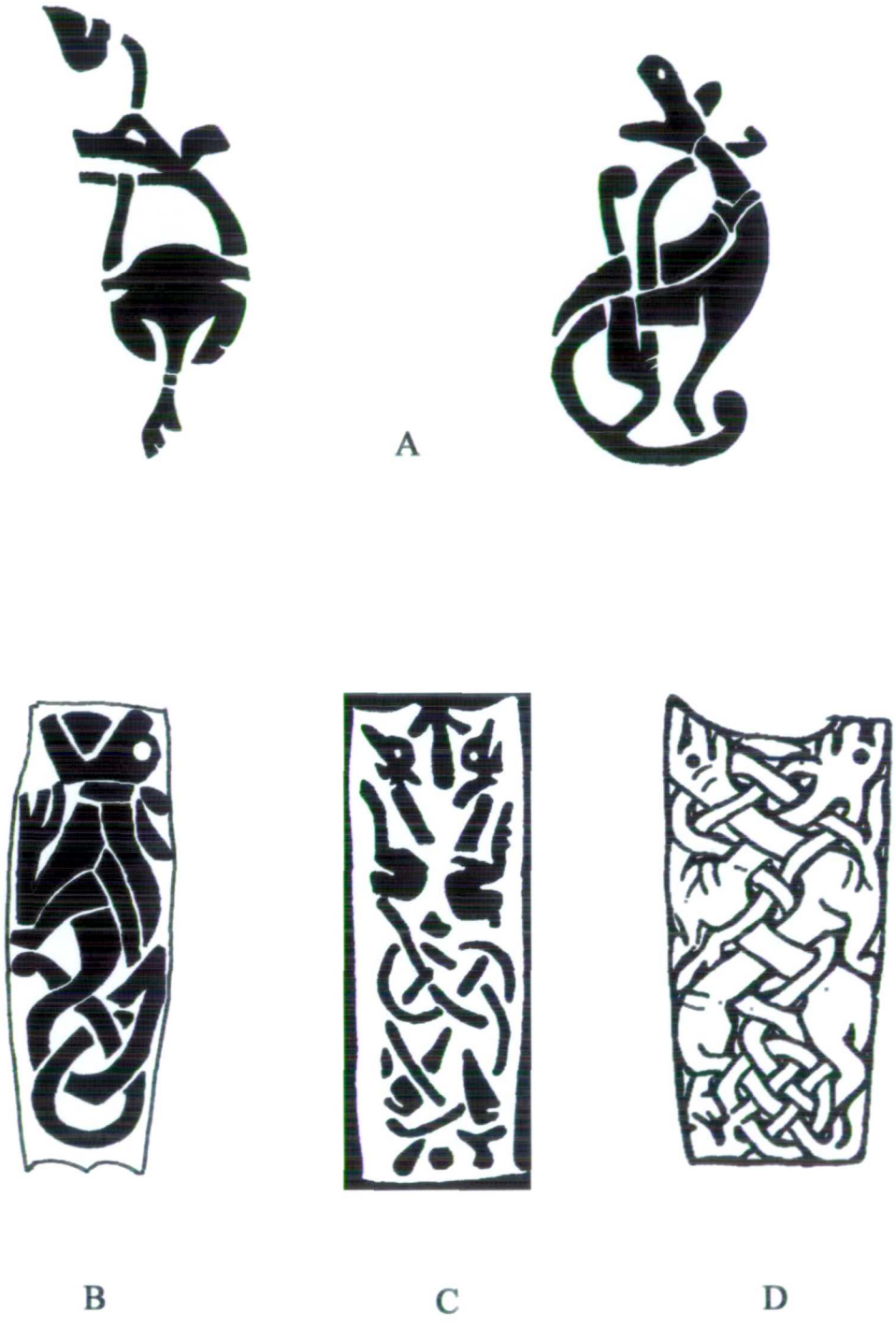


Fig. 6. 3: Comparison of zoomorphic motifs used on the Pentney brooches and selected strap-ends

A: Pentney brooches (from smaller pair and larger of the singletons)
B: cat. no. 391; C: cat. no. 407; D: Østebø, Rogaland, Norway
Not to Scale

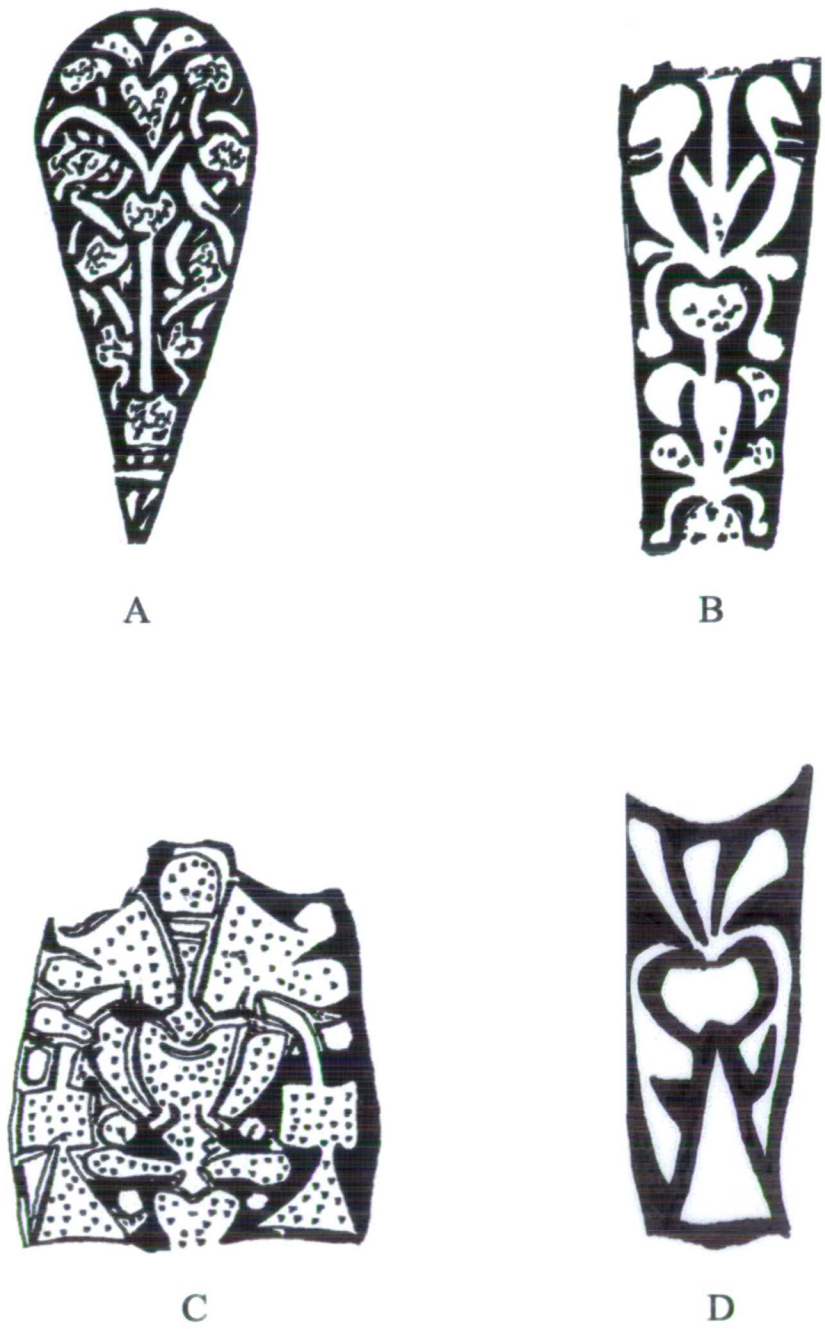


Fig. 6. 4: Comparison of foliate motifs used on the Pentney brooches and selected strap-ends

A: Decorative lobe from the smaller pair of brooches from the Pentney hoard; B: cat. no. 428
C: cat. no. 424; D: cat. no. 425
Not to Scale

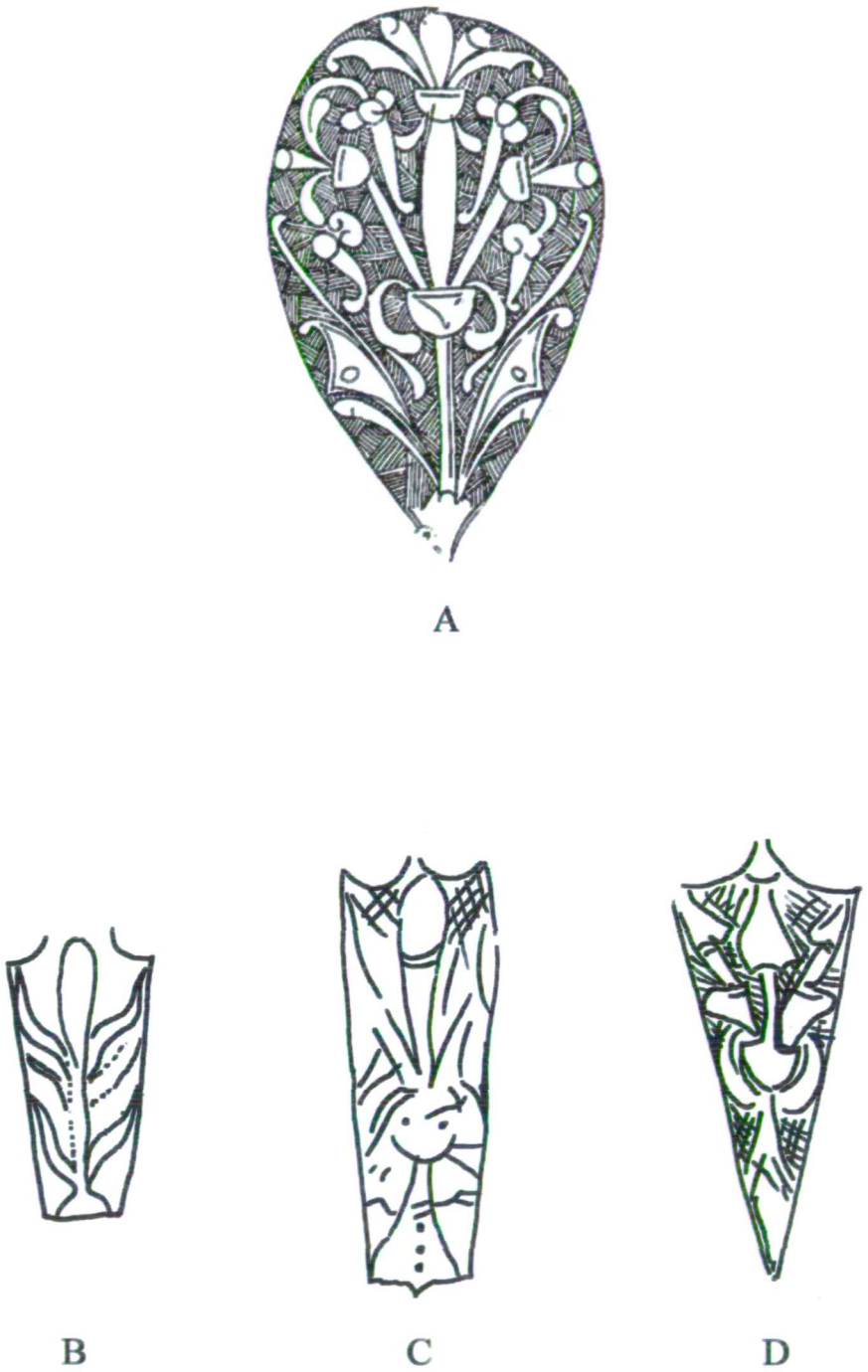


Fig. 6. 5: Comparison of foliate motifs used on Late Saxon ornamental metalwork from and attributed to Wessex

A: Reverse of the Alfred Jewel
B: Strap-end from Chichester, W. Sussex (cat. no. 429);
C: Strap-end from Porchester, Hants (cat. no. 421);
D: Hooked-tag from Porchester, Hants
Not to Scale

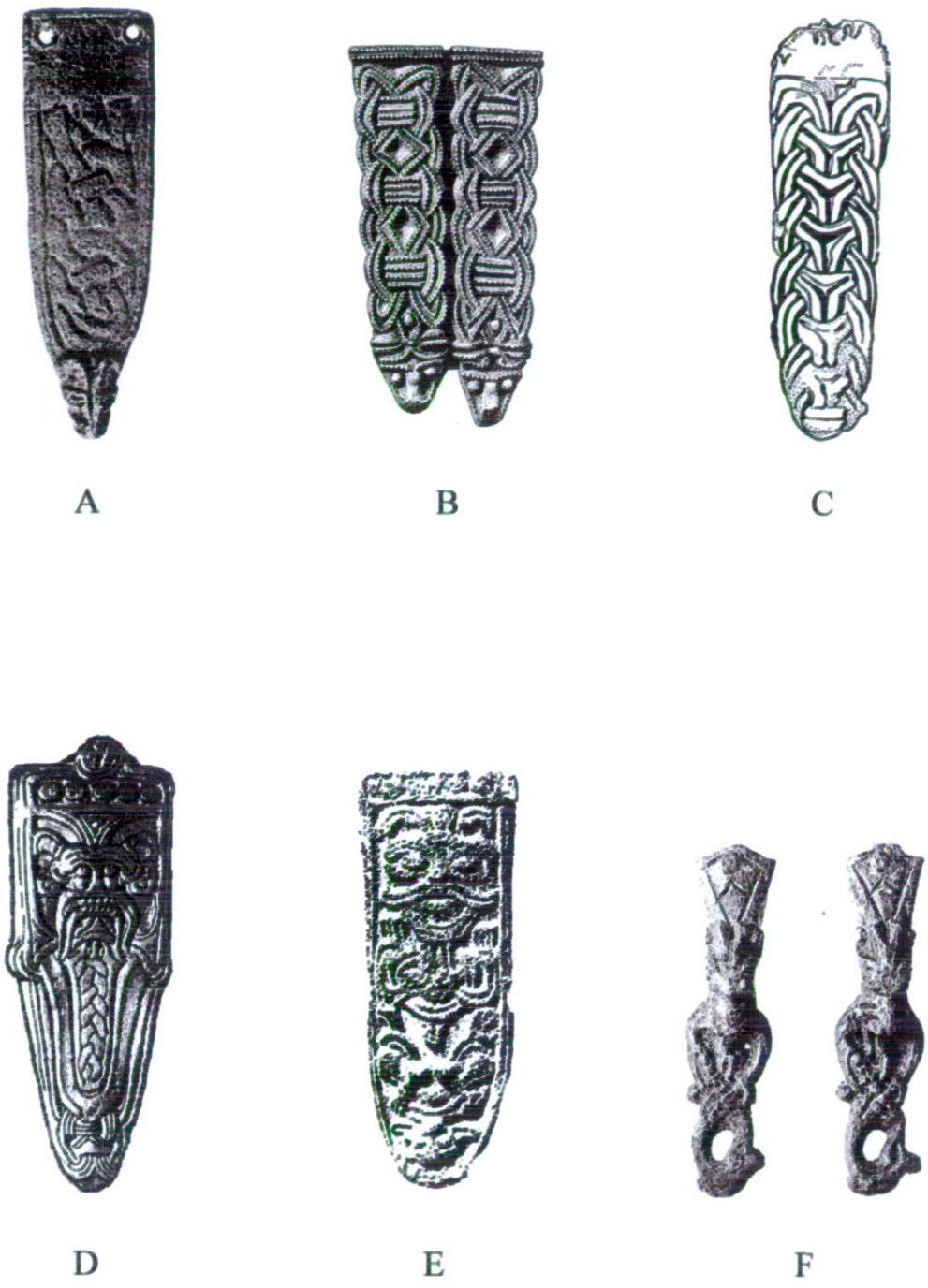


Fig. 6. 6: A selection of Viking-age strap-ends from Scandinavia

A: Aggersborg, Jutland, Denmark; B: Borre, Vestfold, Norway;
C: Sundvor, Rogaland, Norway; D: Dollerup, Denmark;
E: Nedre Store-Var, Stokke, Vestfold, Norway;
F: Barshalder, Grötlingbo, Gotland, Sweden
Scale 1: 1

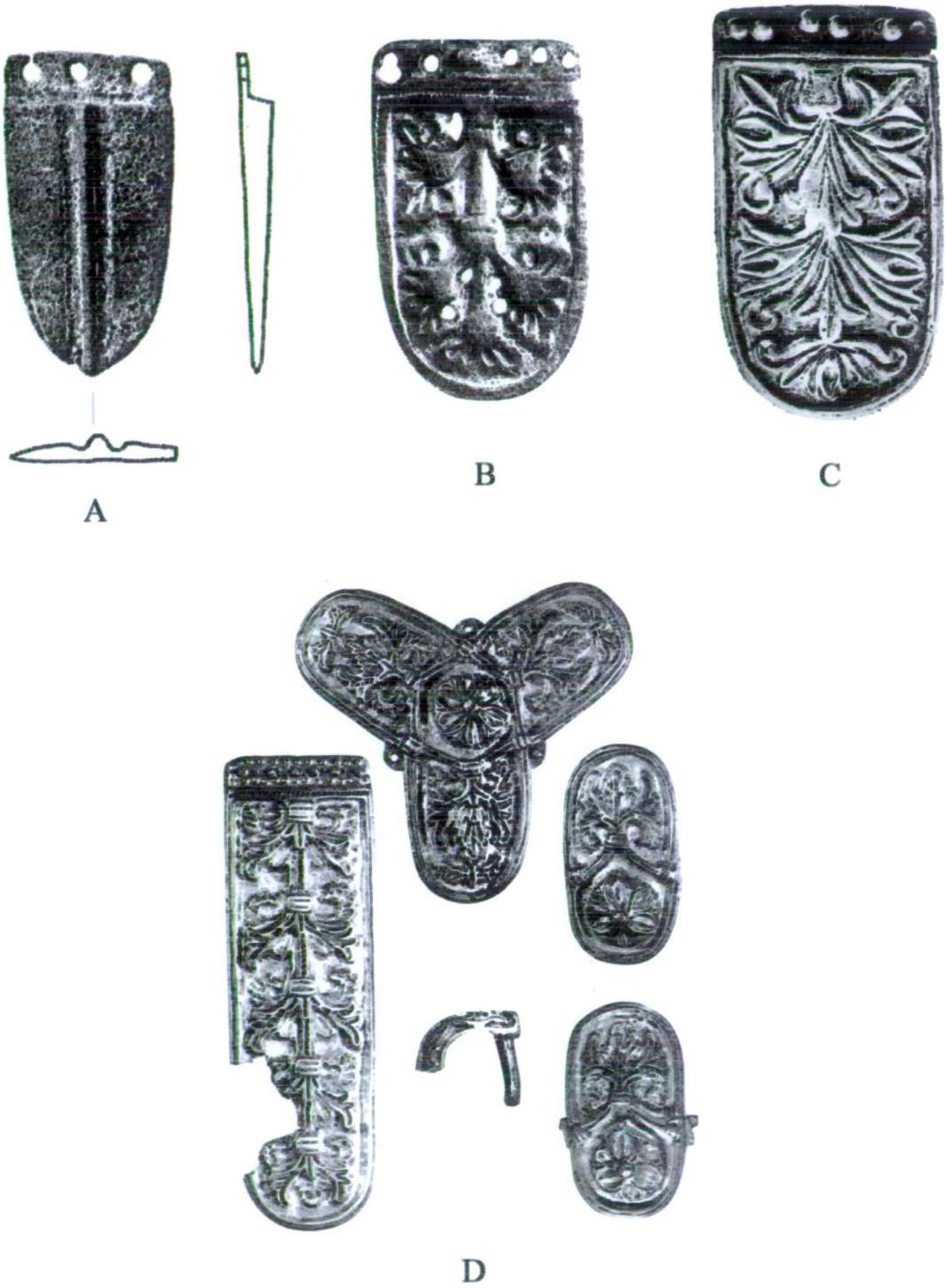


Fig. 6. 7: A selection of Carolingian strap-ends from the Continent

A: Domburg, Holland, Scale 1.5: 1; B: Kinnekulle, Sweden
C: Muysen, Belgium, Scale 1: 1
D: Östra Påboda, Småland, Sweden, Scale 1: 2

A B

Fig. 8. 1: Class E strap-ends depicted in Carolingian manuscripts

A: Vivian Bible, Paris, Bibliothèque Nationale MS lat. 1, fol. 215v
B: Golden Gospels of Charles the Bald, Munich, Clm. 1400, fol. 5v, not to scale

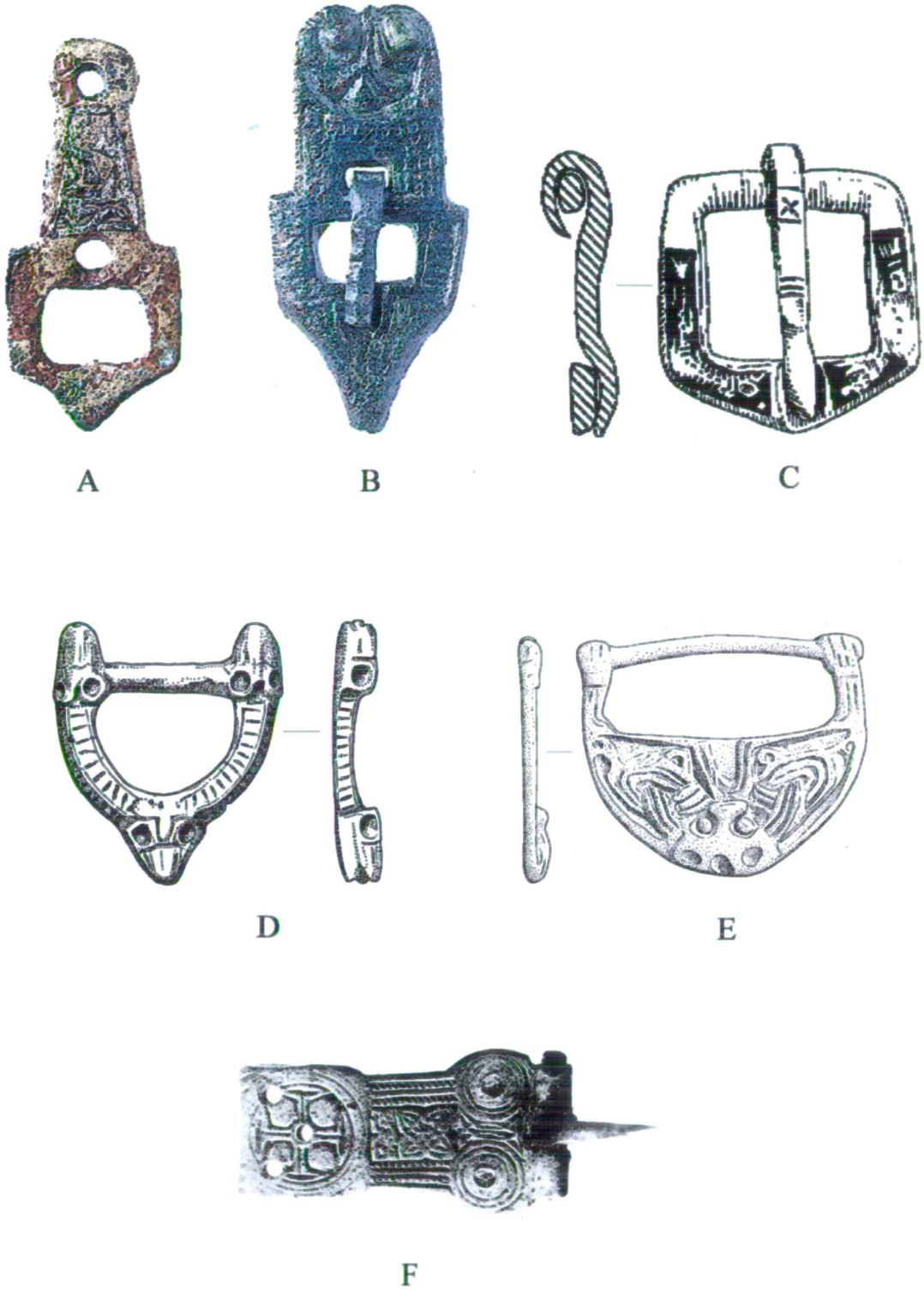


Fig. 8. 2: Examples of Late Saxon and Viking-age buckles

A: Fishergate, York (sf 1343); B: Fishergate, York (sf 3610);
C: St-Paul-in-the-Bail, Lincoln, Scale 2: 1
D: Old Sarum, Wilts; E: Sculthorpe, Norfolk, Scale 1: 1
F: Eynsham, Oxon, Scale 1.5: 1